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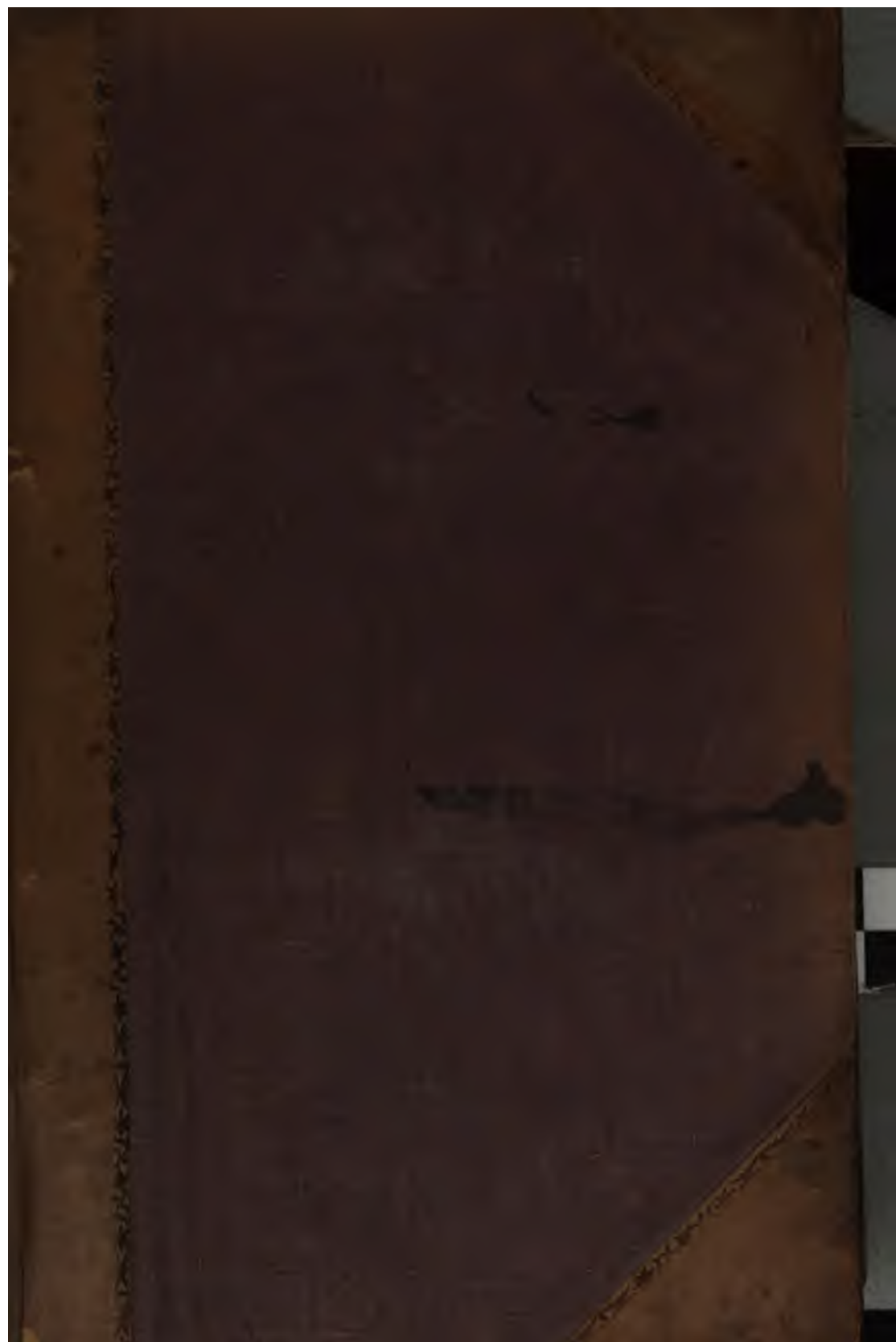
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Figure 1. A very blurry, low-contrast black and white photograph showing indistinct shapes and textures, possibly a landscape or a group of people, but no details are discernible.

COLOURED
ILLUSTRATIONS
OF
British Birds,
AND THEIR
Eggs.

BY H. L. MEYER.

VOL. I.



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PREFACE.

IN presenting a new Edition of his Work to the notice of the Public, the Author has been induced; in compliance with the spirit of the times, to offer it at a much reduced price.

The work will contain all the Birds usually acknowledged by the best authors as being entitled to a place in British Ornithology; and also a representation of the egg of each species, as far as they are at present known. In this respect the Author may fairly assert that his History of British Birds stands without a rival, as no other work on Birds with which he is acquainted, is accompanied by a representation of their eggs; consequently no other work can be considered as complete.

The Author trusts that the flattering favour which has been bestowed by the Public upon his former works will not be withheld from this Edition, which will not be inferior to any work extant in the accuracy, delicacy and high finish of its colouring. Several plates of eggs will be added in the present Edition which were unknown when the former one was published, such as that of the Neophron, &c. &c. When such occur they will bear the numerical figure of the bird to which they belong, and will thus easily be identified.

Chertsey, May 1st, 1852.



ILLUSTRATIONS
OF
BRITISH BIRDS.

ORDER. RAPTORES.

VULTURIDÆ.

THE members of this branch of the order of Birds of Prey are distinguished by having the head partly divested of feathers, or clothed with a short down; the beak straight at the base and inclining downwards at the tip in both mandibles. Their general aspect is sluggish, and their usual appearance, when at rest, is with the wings drooping. They differ in many essential particulars from the more noble birds of prey, especially in their food, which consists, in most of the species, of animals that have fallen a prey to disease or accident, of offal, and decaying animal remains. One European species only, the *Vultur Barbatus*, which approaches in many respects to the habits of the *Falconidæ*, chooses for its food living subjects.

RAPTORES.

VULTURIDÆ.

PLATE I.

EGYPTIAN VULTURE.

NEOPHRON PERCNOPTERUS. (*Sar.*)

OF the six species of Vulture indigenous to Europe, the Egyptian Vulture represented in the plate is the only one that has ever been taken in Britain, and of this but one example is recorded to have occurred, which was shot at Kilve in Somersetshire in 1825. As this individual was in an undoubtedly wild state, it has been considered by all subsequent writers on British Ornithology as affording a fair opportunity of including it among the rare accidental visitants to these shores. Its true locality is in countries much warmer than our own, in which its services are more needed; and where, by a benevolent dispensation of Providence in adapting its powers and inclinations to the offices it is destined to perform, it removes from the face of the earth those putrifying animal substances, which in such climates, without the assistance of these insatiable scavengers, would become noxious to living beings. This species differs from the other European Vultures in its habits, living chiefly in pairs, and not associating like its congeners in flocks. In character the Vulture differs greatly from the other species of Raptores in being destitute of the courage and boldness by which they are distinguished. In the formation of its feet, also, as Temminck justly remarks, it is not furnished with the powerful weapons of offence with which other rapacious birds are



provided, its claws being adapted neither to seize nor to carry off its prey, which it consequently devours on the spot. In their flight, which is powerful and long-sustained, Vultures sometimes ascend to a surprising height in circling gyrations. Their sense of vision and organs of smell are very acute. They are said to be extremely timid and easily put to flight; yet they appear susceptible of a sort of domestication, as they are described by African travellers as attaching themselves to individual groups of the natives in the regions they inhabit. Their geographical range is very extensive, specimens perfectly similar having been found in Norway and at the Cape of Good Hope, in Spain, and in India. In Africa and Turkey they are more numerous than elsewhere. They have not hitherto been found in America.

The Egyptian Vultures choose for their place of nidification the most inaccessible rocks; and their eggs, according to Le Vaillant, are white. The young birds differ greatly in colour from the adult, their plumage being in the first year deep brown, varied with a lighter tint; this plumage gives place as the bird approaches maturity to feathers of a brownish grey interspersed with white, in which state the iris is brown, and the feet, head, and beak, livid. This mottled plumage is succeeded in the mature bird by feathers of spotless white, with the exception of the quills, which are in all stages black. The sexes differ only in size, the female being the larger.

In the Egyptian Vulture the beak is long and compressed; the cere is naked, except at the base, where it is covered with a few radiating white hairs, and extends beyond the middle of the beak; the nostrils are placed in the lower part of the cere, open, and of an oval form; the head and upper part of the neck are nearly naked, the skin livid red, interspersed with a few straggling hairs and white down; the lower part

of the neck covered with long pointed feathers: the toes are partially scutellated; the middle one has five scales, the outer and hinder toes three; the upper part of the toes and the tarsus are reticulated; the claws black, and but little arched: the tail is graduated, and extends three inches and a quarter beyond the tips of the wings.

The entire length of the Egyptian Vulture is thirty-one inches; the bill is two inches four lines in length; the tarsus three inches; the middle toe three inches, the outer and middle toes united at the base; wing from carpus to tip nineteen inches: the inner claw measures thirteen lines, the hinder nearly the same, and describe one fourth of a circle; the outer claw is still less arched. The legs and toes are yellow, the iris red.

The specimen mentioned to have been shot in Somersetshire was in immature plumage, but it was thought advisable to choose an adult individual for the subject of the plate, as affording a more perfect representation of the species to which it belongs.

The eggs of this species exhibit great diversity of appearance, varying from pure white to the deep shades represented in our plate. The eggs figured are from the collection of J. R. Wise, Esquire, of Lincoln college, Oxford, by whom they were kindly lent for the use of this work.



ORDER. RAPTORES.

FALCONIDÆ.

THE birds of prey, placed by ornithologists of all ages at the head of the feathered tribes, are justly entitled to the distinction thus bestowed upon them, by their superior size, their powerful and muscular limbs, their address in pursuing, and courage in attacking, their prey. Those under present consideration attack only living subjects. Of the larger kinds some feed chiefly upon quadrupeds, others plunge into the ocean in pursuit of their aquatic prey. Among the smaller kinds, some attack reptiles, and others nourish themselves almost entirely upon insect food.

The Falconidæ are further distinguished by the powerful offensive weapons with which they are provided, in the strong and hooked beak, and the claws formed for grasping with resistless tenacity. Their flight is rapid and long sustained, and they rise to a great elevation, from whence they are enabled, by their piercing vision, to detect the creatures suited to their wants.

In most species of this family, several years elapse before the perfect adult plumage is attained, during which period many changes take place. These changes are chiefly effected by the annual moult; but partially also, as far as regards the tint of the plumage, by the increasing age of the subject. For instance, the tail of the young male Kestrel, which, in the plumage of the first year, is brown barred with black, may be observed to become more and more inclining to grey at the base, as the bird approaches the

period of the annual autumnal moult, before the actual discharge of the brown feathers, which distinguish the young, give place to the cinereous grey feathers peculiar to the adult.

The feathers of the young birds of this family are generally more varied with spots and streaks than in the adult, whose plumage is coloured in larger masses; and it is invariable that in species in which the feathers of the adult are marked with transverse bars, as in the case of the Peregrine Falcon, Goshawk, Honey Buzzard, etc. those parts in the young are marked with longitudinal streaks and rays. In many species among the Falcons, the young of the year resemble each other so much in plumage that it is difficult to distinguish the species to which they belong, except by an accurate observation of their comparative dimensions, and of the colours of the beak, feet, and cere.



RAPTORES.

FALCONIDÆ.

PLATE II.

GOLDEN EAGLE.

AQUILA CHRYSÆTA. (*Fleming.*)

THE GOLDEN EAGLE is found in many parts of Europe, inhabiting the Pyrenees, the Tyrol, and the mountainous parts of France and Germany. It is common in Sweden, and is found in forest districts in other parts of the north of Europe. In the British Islands the localities of the Golden Eagle are chiefly confined to Scotland, Ireland, the Orkney and Shetland Isles. It is rare in England, although instances of its capture are recorded to have taken place even in some of the southern and western counties. These can,

however, only be considered as of accidental occurrence, since the breeding places are chiefly confined to limits not further south than the Grampians. A geographical survey of the localities above assigned to the Golden Eagle, as well as of those more particularly specified by ornithologists, appear to prove that this species prefers mountains of minor elevation, leaving to a nearly allied species, the *Aquila Imperialis* of Temminck, the more lofty ranges of the Alps and the mountains of Hungary and Austria.

In America, the arctic and temperate regions are alike the abode of the Golden Eagle. In the old Continent its range does not appear to extend far eastward, and it is not included by Temminck among the birds of Japan.

In perfect adult plumage, the Golden Eagle may at once be distinguished from the other British species, by the rufous

feathers that clothe the head and neck, by the dark barred tail, and by the general shade of its plumage.

In young specimens that have not acquired those distinguishing characters, it is less easy to detect the difference between them. Some characters are, however, permanent, and are sufficient, at all ages, to distinguish the species at present under consideration from the White-tailed or Sea Eagle, namely, the feet, which in the Golden Eagle are reticulated, except the last phalanx of each toe, which bears three well-defined scales ; while on the contrary, the toes of the White-tailed species are scutellated through the greater part of their length. The tarsi of the Golden Eagle are also covered with feathers ; those of the White-tailed are naked some space above the foot ; and the tail of the present species is in all stages longer than the wings.

In a state of immaturity the Golden Eagle differs in many particulars of its plumage from the adult ; the feathers on the inside of the thighs, the tarsi, and under tail-coverts being white ; the same colour prevails also upon the tail, which is white for two-thirds of its length, the third occupying the tips of the feathers being brown. In this state of plumage it is generally known as the Ring-tailed Eagle. As the bird approaches maturity the brown colour prevails more and more, encroaching upon the white portion, of which, in a state of perfect maturity, very little remains. Three or four years usually elapse before the adult plumage is entirely completed : the quill-feathers of the wings and tail are the last that attain maturity. The colours of the cere, bill, and feet are nearly the same in young as in adult individuals, and the colour of the eye only varies from a darker to a lighter and more golden tint.

The Golden Eagle is believed to be untameable in disposition. Its cry is a double note uttered many times in succession, and if not in itself clear and sonorous, is rendered so, when heard in the wild regions it inhabits, by the softening

medium of the atmosphere, and harmonises perfectly with the scenes by which it is surrounded, verifying the saying, that in Nature all is harmony. Their food consists of deer, lambs, fawns, and other quadrupeds: they do not reject birds, and are said to regale themselves upon the young of sea fowl. The places chosen for nidification are rocks and lofty forest trees, and the eggs are two or three in number. They appear partial to their old haunts, and have been known to revisit, several years in succession, the same breeding places. By continental authors, the graphic name of Steinadler is bestowed upon this species in allusion to its favourite haunts.

The egg marked No. 2, figured from a specimen in the British Museum, is the one belonging to this species, and is represented, as well as all others in this work, of the natural size.

The following dimensions are taken from an adult specimen in the British Museum. Beak, from the forehead to the tip, two inches three lines; from the gape to the tip, two inches nine lines; from the front corner of the eye to the tip of the beak, three inches. Space from the eye to the nostril covered with radiating black hairs. Length of the wing, from carpus to tip of the third, which is the longest feather in the wing, twenty-six inches and a half. Expanse of foot, seven inches, including the claws. Hinder claw two inches, describing one-third of a circle; inner claw one inch ten lines, middle claw one inch four lines; the claws are grooved beneath. On the middle toe three or four large scales; on the outer, inner, and hinder, three, on the last joint of each toe; middle toe, including the nail, measures three inches and a half. In this species the gape does not extend further backward than the front corner of the eye.

The drawing from which the plate is taken, is from a living specimen at the Zoological Gardens, Regent's Park.

PLATE III.

WHITE-TAILED EAGLE.

HALIÆTUS ALBICILLA. (*Sar.*)

THIS bird is nearly equal in size to the Golden Eagle, but its aspect does not possess the quiet dignity of that species, and the long pointed feathers that cover the head and neck give it rather a haggard appearance.

The White-tailed Eagle is found over all the continent of Europe, principally near the sea-coast and borders of extensive lakes. This species is more common in Britain than the Golden Eagle; and although it is most usually found in the mountainous and rocky parts of the island, many instances are recorded of its appearance in the southern counties during winter, being attracted in that direction, possibly, by the flocks of geese that are driven by the severity of the weather towards the southern rivers. I shall mention only such instances of its capture as have fallen under my own observation.

A specimen was shot on the Thames at Weybridge, in Surrey, in Lord Portmore's park some years since; it had alighted on one of the trees in the park, so near the house that it was shot from one of the windows. The mansion alluded to has since been pulled down, and the whole place, occupying one of the loveliest spots upon the river, is going to decay.

Another individual which had been taken alive in a trap in Suffolk, was for some time in the possession of John



Spicer, Esq. of Esher Place, Surrey, from whence it was transferred to Ashley Park, the seat of Sir Henry Fletcher, which bird I have had frequent opportunities of observing. Another specimen, a young female, was shot in Suffolk in the winter of 1831, the dimensions of which will be subjoined.

A circumstance illustrative of the great muscular strength which these birds possess, I had the pleasure of witnessing in one confined in the Zoological Gardens in the Regent's Park, in the severe winter of 1835.

I was employed in completing a sketch of the bird in question, when I observed him make many endeavours with his beak to break the ice that had frozen upon the tub of water placed in his cage. Finding that all his efforts to get at the water in this manner were ineffectual, he deliberately mounted the uppermost perch in his cage, then suddenly collecting his strength he rushed down with irresistible force, and striking the ice with his powerful claws dashed it to atoms, throwing the water around him in all directions. After performing this feat of strength and sagacity, he quietly allayed his thirst and returned to his perch. This is no doubt the mode employed by this species in a wild state to obtain its aquatic food from the frozen rivers and inland seas it frequents in various parts of the Continent.

The birds represented in this plate are from living specimens in the Zoological Gardens. The brown specimen represents the usual colour of the bird in adult plumage. The pale ash-coloured one is a variety of the White-tailed Eagle brought from Ireland. Various conjectures have been made upon the unusual colour of this bird, that it proceeded from its great age, &c. but none very satisfactory. Whatever may be the cause it has preserved the same colour in its plumage, year after year, ever since its capture. No painting can fitly represent the delicate and beautiful colour of this bird. When its feathers are ruffled, as may be frequently observed,

at the pleasure of the creature, a delicate azure blue tint is seen to pervade the basal part of the feathers, which, appearing through the whole transparent texture, imparts to its plumage the singular tint it displays. It is observable that the beak of this individual is rather less in depth at the base than is usual in this species, and the iris yellowish white.

It is believed that many individuals of the White-tailed Eagle migrate to and from different parts of Europe, according to the season, and are observed to be much more plentiful in Britain in winter than at other times. A circumstance that I think corroborative of this migratory habit occurred many years ago at my father's seat near Haarlem:—An Eagle of this species, apparently spent with fatigue, fell into one of the ornamental pieces of water with which gardens in Holland are frequently embellished. Being within sight of the house the descent was observed by several persons, and one domestic, who wanted neither strength nor courage, got into a boat and throwing a sack over its head succeeded in securing his captive: the bird was too much exhausted to offer much resistance at the time, although a day or two after he made a fierce attack upon a Spanish blood-hound belonging to the establishment, which chanced to approach within his reach. The following dimensions were taken from the bird mentioned in the preceding page,—a female:—

Entire length three feet and a quarter; expanse from wing to wing seven feet and a quarter; weight eight pounds and a half; expanse of foot, including the claws, seven inches; girth of leg two inches; length of hind and inner claws one inch and a half; length of the longest quill-feather twenty inches; of the longest tail-feather fourteen. The beak is three inches from the forehead to the tip; three and a half inches from the tip to the gape.

The males are not so large as the females, seldom measuring more than twenty-eight inches in length.

One in the British Museum, supposed from its small size to be a male, measures much less than the female above described. The beak is two inches from the forehead to the tip, and three inches from the tip to the gape; the longest quill-feather of the wing seventeen inches. This specimen resembles very nearly the brown one represented in the plate, with the exception of the upper coverts of the tail, which are dark chocolate, two or three only being a little mottled with white; the tail is pure white. It would thus appear that the upper tail-coverts are the last part of the plumage that attains maturity. Mr. Selby describes a bird in his possession as having "the tail, and upper tail-coverts white;" while Dr. Latham, on the authority of Dr. Heysham, says, that an individual which had been kept in confinement, was "six or seven years before the tail became white." This species goes through many interesting changes of colour in the course of its progress from the nestling to a state of maturity. We are informed by Montague, speaking of some young birds that he had obtained from the coun-

ty of Down, that "the Eaglets were at first covered with a glossy, dark, murrey-coloured down; on their first moulting they became much darker, particularly about the breast and thighs, the latter almost of a dusky black, and it was not until they were two years old that the base of the bill became yellow." In this dark state of plumage the iris is umber brown; and it is not until the upper tail-coverts begin to assume the white colour, indicative of maturity, that the iris becomes yellow, tinged with burnt sienna.

In this species the lower part of the tarsus is bare of feathers, scutellated in front, the hinder part reticulated; the claws are grooved beneath. The beak is long, straight at the base, and bending from the cere to the tip; the gape extends nearly as far as the hinder corner of the eye.

The egg marked No. 3 belongs to this species. The food of the White-tailed Eagle consists of fish, birds, and quadrupeds.

It is indigenous in England; and the localities chosen for its nest are precipitous cliffs near the sea-coast, or in the vicinity of lakes. The eggs are two in number.



2.



3.





RAPTORES.

FALCONIDÆ.

PLATE IV.

OSPREY.

AQUILA HALLEETUS. (*Meyer.*)

THE OSPREY is one of the smallest of the Eagle tribe, and in many of its characters differs from them so essentially as to have induced some recent ornithologists to separate it from the genus *Aquila*, and form for its reception a new division under the name of *Pandion*.

The Osprey is met with in the northern parts both of the old and of the new world. His favourite haunt is on the borders of lakes and rivers that abound with fish; he prefers the vicinity of fresh waters, but when driven from them by the frost and ice of winter he resorts to the sea coast, where he can at all times procure a supply sufficient for his wants. The appearance of the Osprey when on the wing is different from that of any other bird: his flight is sedate, with slow and continued motion of the wings, and with his tail slightly depressed. Occasionally he sails for short intervals with wings extended and motionless watching for his prey. When he perceives a fish, he may be observed for some time hovering over it until certain of his quarry; he then rushes down perpendicularly from his elevated station with great rapidity, with wings closed and claws extended, and disappears for a second beneath the splashing waves, the water closing above him. When he again emerges successful, he rises shaking the water from his plumage by a shivering motion, utters a

cry of joy and exultation, mounts high in the air, and soars away to a distance to devour his prey. If, however, the fish is too large to be borne away, he will consume it near the water's edge. His manner of holding the fish is always with the head directed forwards, and in this position the peculiar formation of the scales of his feet enable him to hold it so firmly that it is impossible even for prey so slippery to elude his grasp. He sometimes hooks his claws so deeply into the fish that he cannot extricate them until he has consumed it, by carefully picking the flesh from the bones.

Ospreys have been observed to plunge into the water and not to rise again, which leads to the supposition that they occasionally strike their claws into a fish too large for their strength, and consequently are retained involuntarily beneath the water and drowned. The peculiar formation of the feet of the Osprey renders such a conjecture not altogether impossible. The food of this species consists entirely of fish, from a quarter of a pound to two pounds and a half in weight. Trout and carp are preferred, but they will also take other kinds that approach the surface of the water, such as perch, chub, roach, etc. The Osprey does not pursue his prey to any great depth, as may be inferred by his rising almost instantaneously after having plunged in pursuit of it; and he is consequently sometimes observed to emerge unsuccessful, having failed in the attempt to reach his prey.

When at rest, the Osprey may be seen seated upon a rock, mountain, hill, or stone, but he rarely alights upon a tree. They build, however, in forests upon a lofty tree, or resort to buildings, ruins, etc. The nest is composed of an abundance of strong branches, and is of a platform shape. In May the female lays three or four eggs, which are hatched after three weeks' incubation. The young birds are entirely fed with fish, and are supplied by both parents. When, in the act of fishing, the Osprey visits a pond, he crosses it

several times at no great elevation; if he perceives no fish, he passes on to another, and continues the pursuit until successful. His times of feeding have been observed to be eight or nine in the morning, and from twelve to two in the afternoon; between these periods he is rarely seen, but sits quietly in a retired place digesting the previous meal. The Osprey is a great enemy to preserves of fish, of carp in particular, and will remain for days and weeks in the neighbourhood of them, if undisturbed; but he is shy and watchful, and does not soon revisit a place where once he has been fired upon. It requires a considerable charge to kill or arrest the progress of an Osprey, as the feathers of this species are remarkable for being closely placed, especially on the under parts, and resemble in this respect, and also in texture, those of water birds; without this provision of nature, their plumage, from frequent submersion, would become so loaded with moisture as to obstruct their flight. Different modes are employed for catching the Osprey: they are sometimes taken by means of a steel spring placed under water, to which a live fish is attached; nets are also employed for the same purpose with a fish for a bait. Young Ospreys may be brought into subjection and taught to catch fish.

The Osprey is a bird of not uncommon appearance, and is indigenous in some of the more hilly parts of England; but on account of its being limited to one species of food, it is only found in the vicinity of rivers and lakes, and on the borders of the sea. It is indigenous also in the mountainous and wooded parts of Wales, Scotland, and Ireland, and resident throughout the year. This species is widely distributed both in the northern and southern hemispheres, remaining in polar regions a shorter or longer time according to the latitude and the opportunities of procuring food. In the central parts of the European continent it is also migratory, and is found there chiefly in summer, when the absence

of frost enables it to procure its food from the rivers of the interior; but it retreats during the winter, sometimes as early as September, and returns again in spring as soon as the waters are open. The Osprey is frequently pursued by other birds of prey in order to rob him of the remains of his food, especially by the Moor Buzzard and the Crow.

The general description of the Osprey is as follows :—The cere and legs are light blue, the iris yellow. The legs are very strong, feathered for three-quarters of an inch below the knee before; the knee naked behind and roughly scaled: the larger claws form half a circle. From the eyes to the shoulders, on both sides, runs a blackish brown band; the under parts are white, with a few arrow-shaped marks on the breast: the tail is crossed with six dark transverse bars.

The Osprey differs very materially from all other birds in many peculiarities connected with its fishing habits, which render it admirably adapted to its particular mode of life. Its feet are of a remarkable character, strong, and so constructed as to enable it to retain a powerful grasp upon its prey. The feet as well as the legs are covered with a rough granulated skin like that of the shark; the roughest part is on the sole of the foot, where the reticulations are in the form of sharp spines; all these incline backwards towards the junction of the toes: on the foremost ball of the sole, both of the outer and middle toe, the spines are longer than elsewhere to assist in holding the fish. The toes are strong and thick, and the outer one reversible; the claws are much arched, round, and smooth beneath, not grooved as in the other species of *Aquila*. The middle toe measures three inches one line, of which the claw occupies thirteen lines; the hind toe two inches one line; the inner and outer toes nearly the same: the claws, which are included in the measurement, are of each one inch and one line.

The entire length of the male is twenty-four inches. The

wings when closed reach to the tip of the tail; the third quill-feather is the longest. The tail-feathers are about eight inches long, and of equal length. The beak measures one inch and a half from the forehead to the tip (following the curve two inches), and is three-fourths of an inch in thickness at the base. The cere and upper part of the beak are blue, the tip dark horn colour. The nostrils are slanting, the iris golden yellow, but paler in young specimens. The female is larger, and measures from five to six inches more in length than the male. In the adult male the crown of the head is white, marked with dark brown spots; round the eyes runs a dusky ring which encircles the white eyelids. The elongated bristling feathers of the head and neck are white, with yellow points and a few dark brown shafts. From the base of the bill and along the temples runs a blackish brown band towards the back of the neck and forwards to the wing, and loses itself in the back feathers. All the under parts are white, tinged in some places with yellow; the breast only is marked with brown spots of an arrow-head form. The under tail-coverts are sometimes spotted with pale rufous. The feathers on the back and wings are dull brown, the tertials sometimes edged with white; the quill-feathers are dusky; the tail is brown with six bars across it of a darker colour. The outer feathers of the tail are lighter than the central ones, and the under parts white between the brown bars; the shafts beneath yellowish white: the thigh feathers are white, very short and close, as is the case with other birds of aquatic habits. The bird represented in the plate is an adult male. The adult female differs only from the male in superiority of size, and in having the marks on the breast stronger. In the young male the back feathers and wing-coverts are bordered with pure white, giving a variegated appearance. In the young female these are less distinct and of a dirty colour. The white borders are most prominent in the fresh feathers,

and disappear almost entirely before the return of the annual moult ; consequently the appearance and description of this bird vary greatly at different seasons.

The egg marked No. 4 belongs to this species, and is figured from a specimen in the rich collection of W. Yarrell, Esq. to whose unvarying kindness I have been indebted for the loan of many valuable specimens both of birds and eggs.





RAPTORES.

FALCONIDÆ.

PLATE V.

GOSHAWK.

ASTUR PALUMBARIUS, (*Bechst.*)

THE GOSHAWK is common in all the northern and temperate regions of Europe and Asia, in North America, and the northern parts of Africa. In central Europe there are few places where it may not be numbered among the common birds of the country. In Britain the Goshawk is not very numerous; it is of rare occurrence in the southern parts, but more frequently found in Scotland, where it is known to breed. It inhabits, indifferently, mountainous or flat countries, provided the district is well wooded and interspersed with fields and occasional tracts of open land. Extensive forests and unsheltered plains are less frequented by the Goshawk than districts of a more varied aspect. The number of this species that breed in the central parts of Europe, is not very considerable; in those parts it is a bird of passage, which arrives from the north, and passes the winter in the South of Europe.

The flight of this bird is quicker than the shortness of its wings would lead us to expect. He generally flies low, with his tail closed; but in fine and warm weather he may be seen in the higher regions of the air with tail expanded, wheeling round from time to time as if for the purpose of cooling himself. The Goshawk is generally shy, and upon his guard, nevertheless, when in pursuit of his prey, his voracious ap-

petite sometimes leads him into danger, and he thus readily falls into snares or traps laid for him by the bird-catcher. The male, although smaller than the female, greatly surpasses her in boldness, courage, and quickness : he is therefore more valued by the falconer. The Goshawk was at all times a favourite falcon for the chase, although being stubborn and self-willed, he is more difficult to train than some other species. Rapine and love of bloodshed characterize him, yet these savage qualities are united with much courage, sagacity, strength, and agility. His voice in times of danger is a loud single note, many times repeated, and bears a great resemblance to that of the Sparrow-hawk ; besides this cry, he utters another much resembling the note of the Peregrine Falcon, which is chiefly used when engaged in a contest with some other bird of prey. When the Goshawk seeks a place of rest, it is usually a branch in the middle of a tree ; he is never seen in the top, and rarely on a rock in open country. He passes the night generally in copse wood, in preference to large trees, or if he chooses a pine tree he perches only ten or twenty feet from the ground. When at rest he sits in a slouching attitude, with his back raised, and his head rather depressed ; but does not drop his tail in the manner that some other birds of prey are in the habit of doing. This bird is less noble in the acceptation of the term by falconers than some other Hawks. He catches, indifferently, flying and perching birds, the large and the small ; he does not descend upon them from above like other falcons, but attacks them from below or sideways.

He is fond of woods, and in such places he chiefly resides, and there retreats with his prey in order to consume it at his pleasure. No uninvited guests dare approach him while engaged in this occupation, but in order to avoid interruption he usually conceals himself when at meals. If his wooded retreat be too distant he will hide himself behind a bush or

tuft of verdure. He frequently chases and seizes partridges and pigeons ; the places chosen by him rendering such birds peculiarly liable to fall in his way ; he also takes small perching birds of any kind. Wild ducks, pheasants, black grouse, crows, magpies, &c. are all acceptable. Of mammalia, he takes hares, rabbits, and sometimes mice. All birds that fly low are subject to become his prey, as he does not follow the chase in the upper regions of the air. Wood-pigeons seem to be his peculiar property, these and all other birds are panic-struck by his unexpected appearance, and already bleed under his grasp before they have sufficiently recovered from the alarm of his sudden apparition, to be able to provide for their safety by laying themselves close to the ground ; with partridges this is frequently the case. He is so ardent in the pursuit of his prey, that he sometimes chases pigeons into the farm-yard, and, as before mentioned, occasionally brings himself into captivity by pouncing upon the call-bird of the bird-catcher.

In his turn, the Goshawk is pursued by Rooks, which follow him with clamorous outcries, and not unfrequently one of these vociferous enemies pays for his boldness with the forfeit of his life.

Before he begins to tear his prey in pieces he plucks them nearly clean of feathers, but small animals he swallows entire. Living prey alone is sought by the Goshawk.

As early as March pairs may be seen soaring over their place of incubation, and describing circles high in the air. They build in forests in the oldest and loftiest fir trees, oaks, &c. The nest is composed of dead sticks and moss, and is large and flat. The female lays three or four eggs, of a short oval form, and greenish white colour ; some are marked with yellowish brown spots, others quite plain. The young birds which make their appearance at the expiration of three weeks, are covered with a white down. During incubation the fe-

male is fed by the male, at which time he confines his pursuit chiefly to the forest, and frequently takes rooks, turtle, and ring-doves off their nests, thus destroying innumerable broods. After the gathering in of the corn he again leaves the forests and pursues the chase through corn-fields and thickets as before.

When gorged with food, and sitting at rest among the branches of a tree, the Goshawk falls an easy prey to the sportsman, who may then approach him unperceived by concealing himself among the trees as he advances. In former times the Goshawk was much used for the chase, and it still retains the preference among short-winged hawks. It may be trained to take hares, rabbits, herons, pheasants, and partridges, pigeons, &c. Among preserves of game he is a most destructive enemy; and during the season of rearing his young, commits great ravages, no inconsiderable supply of food being necessary to satisfy the wants of his family.

The beak of the Goshawk is strong, bending from the base; the upper mandible has a large tooth or festoon. The nostrils are egg-shaped. The wings are short, reaching only two-thirds the length of the tail; the first quill-feather is much shorter than the second; the third and fourth of equal length, and the longest in the wing; the shafts of all rather stout and strong. The legs and feet are of moderate length and strength; the middle toe long, the claws much hooked and sharp, the balls beneath the toes, which constitute the sole of the foot, are very prominent.

In the adult male the cere, legs, and feet, are full yellow; the claws black; the beak is bluish horn colour at the base, black at the tip; the iris orange-yellow. Over the eyes a white streak, inclining towards the back of the head; the space between the beak and the eyes is covered with white down, and radiating black hairs. The head, neck, back, wings and tail, are cinereous ash-colour, intermixed with

brown, and darkest on the head. The tail-feathers have four, five, or six, transverse bars of a dusky colour, and a narrow white band at the tip; also, at the root, under the tail-coverts the feathers are intermixed with white. The throat is white, streaked with dusky; the lower throat, breast, thighs, and feathers under the wings, are barred with dusky transverse lines. These lines are regularly disposed, and are about half the width of the white space between them; each feather has four or five bars. The quills are dark brown towards the tip, and crossed with dusky bars towards the roots. On the lower surface the quills and tail-feathers are greyish white, the dark bars appearing through them in consequence of their transparent texture.

The ash-colour upon the upper plumage of the Goshawk is to be seen only upon living and recently killed specimens; it is a kind of bloom which disappears shortly after the bird is dead, and turns to a greyish brown; the older cabinet specimens become, the less they retain of the grey tint: a similar change takes place in the upper plumage of the adult Sparrow-Hawk, but not quite to the same extent; the grey colour in that species being more permanent.

The colouring and markings of the young males are, during the first year, very different from those of the adult. The feathers of the head are dark brown edged with rufous; the nape cinnamon brown, with an oblong dusky spot in the centre of each feather. The feathers of the upper plumage are brown, tipped with white.

The tail-feathers have five dusky, and five greyish brown bars, and are all tipped with white. The quills, tertials, and secondaries are dusky, with greyish brown bars. The throat, and a band over the eyes white, speckled with brown. The breast, belly, thighs, and feathers under the wings, light cinnamon brown, or white strongly tinged with rufous. All these reddish feathers have in the centre a dusky stripe,

broad at the root than at the tip, and much narrower on the thighs and belly than on the breast. In young birds the iris is pale yellow, and the feet the same, tinged at the joints with green. The young female is paler in colour than the male, and the dusky spots on the under plumage are larger. She is also of larger dimensions than the male, and stronger. The annual moult takes place in July or August, at which time birds of a year old begin to exchange the plumage just described for a very different livery. It resembles, in general appearance, that of the adult birds, but the back is browner, and the under parts dirty white or yellow, and the transverse bars broader and less numerous. Several years elapse before the upper plumage acquires the fine grey colour, and the under parts the bluish white, proper to the adult.

The adult female is more brown than blue on the upper parts, and her under plumage strongly tinged with rust colour; when very old the adult female differs very little from the male, and can not without difficulty be distinguished from him.

The length of the male Goshawk is twenty-one inches, from the carpus to the tip of the wing twelve inches and a half. The beak measures in diameter from the forehead to the tip thirteen lines, in the arc fifteen lines, and nine lines in thickness at the base. The tarsi are feathered half way down, scutellated before and behind, and three inches in length; the toes are scutellated on the upper surface; the middle toe measures two inches and a half, including the claws; outer, one inch eight lines; the inner toe two inches three lines, the hinder two inches three lines, including the claws, which occupy one inch.



PLATE VI.

SPARROW-HAWK.

ACCIPITER FRINGILLARIUS. (*Will.*)

THIS well-known bird is commonly met with in all parts of England in situations suited to it. It prefers wooded country, interspersed with meadows and corn-fields, as in such parts its favourite food abounds. The female Sparrow-Hawk is much more frequently seen than the male, as she is of bolder disposition, and seeks her food in the neighbourhood of villages, in their gardens and hedgerows, where she is the constant enemy of the sparrow race, and destroys them in great numbers; she will also take young or feeble pigeons from the farm-yard. The male is in his habits much more shy and retired, seldom approaching villages, but concealing himself, in preference, in woods and copses; in such localities he seeks his prey, which consists of finches, buntings, and blackbirds, also mice, cockchafers, and grasshoppers. He is, however, sometimes bold enough in early morning, when pressed by hunger, to attack the call-bird of the bird-catcher. The bird represented in the plate, a male in perfect adult plumage, was taken in this manner. In manners and habits, as well as in appearance, the Sparrow-Hawk bears a striking resemblance to the Goshawk. Like him the Sparrow-Hawk takes his prey perching or flying, or sweeps it from the ground; like him, also, he hides himself behind a bush to devour his prey, being very jealous of observation. The

flight of the Sparrow-Hawk is particularly buoyant, from the extreme lightness of his slender body, and rapid, notwithstanding his short wings. He is valued by the falconer on account of his readiness in learning the lessons instilled by his master; he is courageous and daring, and will attack birds much his superior in size. The female, on account of her superiority of size, may be trained to catch partridges and quails. In the month of April the Sparrow-Hawk retires into the woods with his mate: the place chosen for nidification is usually among the uppermost branches of a pine or fir tree. The nest consists of sticks and is lined with moss and hair, and flat in form: sometimes a deserted crow's nest is chosen for the foundation. The eggs are from four in number to six or seven, and are marked with reddish brown blotches upon a bluish white ground. The blue ground colour fades shortly after the eggs are preserved; cabinet specimens are therefore paler than the one represented in the plate (fig. 6), which was drawn from a fresh specimen taken from a fir tree in the woods at Claremont. The young birds, which are hatched after three weeks' incubation, are at first covered with white down; the females may be detected even in the nest by their superior size: they are fed upon small birds, mice, and insects. The mother courageously defends her young if molested, and will lose her life rather than leave the spot; the male, more shy, will retreat on the first alarm, and from a distance view the tragedy that ensues. Although the Sparrow-Hawk is well known to feed on pigeons, and is even said to take the young ones from their nest, I am acquainted with an instance of a pair of pigeons and their young offspring being respected by a pair of Sparrow-Hawks, although in the immediate vicinity of their own young brood. On the banks of the Thames at Weybridge a pair of these Hawks built in the top of a lofty cedar tree; in a few days a pair of wood-pigeons selected a lower branch of the same

tree, in which they also built their nest, and subsequently hatched and reared their young ones entirely unmolested by their dangerous neighbours.

This Hawk is the greatest enemy of sparrows and other small birds; and as he can take them at every disadvantage, they have no way of escape but by flying into a hole in a tree, or hiding themselves in some other manner from observation. If they are overtaken by him, and there is no shelter near, they will crouch close to the ground, and in this manner sometimes escapes his vigilance.

When in search of his prey he flies with the swiftness of an arrow, and in order that his approach may not be observed, he skims near the ground, or close to hedges and palings; when arrived at the spot where he expects the birds he is in pursuit of, he mounts quickly and descends like lightning upon the little flock, and, having secured his victim, escapes with it to his retreat. The larger birds are plucked very clean before they are devoured; the smaller ones are swallowed nearly entire. I have seen a Sparrow-Hawk swallow even the legs and long hind claws of the skylark. Sparrow-Hawks are not only met with in all parts of Europe, but in the temperate regions of Asia and Africa.

When alive, or recently killed, the upper plumage of the adult male Sparrow-Hawk is rich bluish grey, as represented in the plate; this colour is more or less evanescent, although more permanent in this species than in the Goshawk. Above the eyes is an interrupted band of white, which passes to the back of the head, and is permanent at all ages. The tail and upper tail-coverts are of the same colour as the back and wings: the quill-feathers are dusky grey towards the tips, the outer web brownish. The under parts are white, barred with brown and rust colour, and tinged with rust along the sides of the neck and flanks. The beak is blue at the base, the tip dark horn; the base of the under mandible ochreous

yellow. The cere and orbits are yellow, the iris rich orange; the feet and legs are full yellow or gold colour, long and slender, and the balls or soles of the feet, very prominent; the claws black; the outer and middle toes are united by a membrane.

The very old female nearly resembles the male, but her upper plumage is of a duller and more leaden tint, and her under parts are not tinged with rufous. The young male has no grey on the upper parts; his feathers are dusky, bordered with reddish brown; the tail-feathers brown, crossed with dark bars as in the adult. The young female much resembles the young male, but her plumage is of duller colours; dusky above, bordered with greyish brown, beneath dusky and white. The legs and cere of the young birds are greenish yellow; the eyes yellow instead of orange. The eyes of the Sparrow-Hawk have a peculiar restlessness, lustre, and beauty above all other birds.

Entire length of the male twelve inches; length of the wing, from carpus to tip, seven inches two lines. The tail extends three inches beyond the tip of the wings. The tarsus measures two inches and a quarter; the middle toe and claw, two inches; the hinder, one inch; the inner, one inch; the outer, one inch ten lines. The claw of the inner toe measures six lines, of the hinder, five; the middle and outer, three lines. The beak measures six lines; in the arc, eight lines. The female is nearly one-fourth larger than the male, and weighs six or seven ounces more.

The Sparrow-Hawk has been separated from the genus *Astur*, in which it was formerly placed, on account of its long and slender legs,—an arrangement which we have adopted, although we think the difference hardly sufficient to constitute a separate genus, consisting, as it does, merely in the superior length and slenderness of the legs: in all other respects the same generic characters apply to both.

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775



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M. J.

PLATE VII.

JER FALCON.

FALCO ISLANDICUS. (*Latham.*)

WE cannot better describe the peculiar characteristic distinctions of the genus "Falco," the one under present consideration, than in the words of T. P. Selby, Esq. "The birds of this genus," he observes, "justly considered the typical form of the Falconidæ, as possessing the raptorial powers in the highest perfection, are distinguished from the other groups by their stronger bill, furnished with an acute tooth; their long and acuminate wings, vigorous power of flight, and peculiar mode of capturing their prey. From their docility, and susceptibility of being reclaimed, that is, trained to the purposes of Falconry, they have been usually termed the noble birds of prey, all the others coming under the designation of ignoble."

The Jer Falcon is a native of the most northern parts of Europe, Asia, and America; inhabiting Iceland, Norway, and Lapland; Greenland, and the countries around Hudson's Bay. It is chiefly found in the most mountainous parts, but occasionally visits the level tracts and the sea-coast in search of food. According to the best authorities, the Jer Falcon confines itself during the summer months to those countries that border on the Arctic regions, rarely visiting the southern parts of Sweden until late in the autumn, and even in winter seldom descending below sixty degrees of north latitude.

This species is, however, not entirely confined to such northern regions, as it is occasionally met with in Germany, and other parts of Europe, in winter ; and many instances are recorded of its appearance in Scotland, Wales, and England, even to the most southern parts, but such occurrences are rare.

This beautiful bird is the largest of all true Falcons, and possesses, in an eminent degree, the peculiar attributes of its tribe. As the Golden Eagle deserves the first place among eagles, so does the Jer Falcon among the falcon tribe. In him, courage, power, and speed, are united with a noble appearance and an elegant and graceful form. His shoulders are broad ; his chest full and round ; his wings long and pointed ; his tail narrow ; his beak is short, thick, and doubly toothed : his feet are strong ; the tarsi short and stout ; the toes are very long, with large balls on the soles of the feet, and strong sharp claws. His compact clothing, consisting of closely set and firm feathers, contributes much to display to advantage his noble form.

Notwithstanding his wild and lively nature, which is perceptible through all his actions, this species is easily trained for the chase, and being strong, courageous, active, enduring, and willing to obey, he has always obtained the preference among birds used in falconry ; and although his natural residence is in high northern latitudes, individuals have been kept for several years at a time in England, and used for the chase. A trained and well kept Falcon will live from ten to twelve years in confinement. Now, however, this once favourite sport having been so long on the decline, owing to various causes, a Jer Falcon is become a rare sight in England. In countries where this sport is still pursued, the preference is given to birds that are taken when about a year old ; older birds are less valued ; and those taken from the nest and brought up in confinement, a practice sometimes

pursued, are still less adapted to purposes of falconry. Falconry has declined for many years on the continent of Europe as well as in England, which is attributed in a great measure to the long duration of war in the beginning of this century, which was the means of breaking up many hawking establishments.

In confinement this species requires to be treated with great care, and in order to retain his powers in perfection, he must be fed entirely upon fresh food, especially birds.

In a wild state the food of the Jer Falcon consists of hares, and other animals of a similar size, and birds, among which the ptarmigan is preferred, and pursued unceasingly. In his manner of pursuing and taking his game, the Jer Falcon much resembles the Peregrine. Like him, he descends with the swiftness of thought upon his prey; in case of failure he reascends and repeats the stroke. These birds never descend perpendicularly, but always in a slanting direction, upon their prey.

The Jer Falcons build upon lofty and precipitous rocks, and their eggs are two or three in number. From these situations the young are sometimes obtained with considerable risk, the old birds defending the nestlings with great intrepidity.

The Jer Falcon can only be considered in Britain as an accidental visiter, and probably all that have been taken here have been immature. M. Boié is of opinion that in their adult state, birds of this species do not quit their native Arctic regions; and Temminck concurs in the same opinion.

The bird represented in the plate is from a specimen preserved in the British Museum, and is apparently beyond the middle age. The very old birds are said to become perfectly white, as the spots upon the feathers decrease in size at every succeeding moult. The following measurements were taken from the same bird, which appears from its size to be a male.

The beak, from the forehead to the tip, measures in diameter one inch and one line, but in the arc one inch six lines. The beak is of a peculiar form, having the tooth longer than in any other species of British Falcon. The nostril is round, as in all true Falcons, and has a small pyramid or column in the centre. The wings measure from the carpus to the tip fourteen inches, and extend to within two inches of the tip of the tail. The middle toe, which much exceeds the others in length, measures three inches, including the claw. The inner claw, which is the longest, measures in the arc one inch and two lines. The tarsi are feathered half the way down, the naked part as well as the base of the toes reticulated; the remaining part of the toes, towards the claws, scutellated. The claws are black, hooked, and finely pointed. The legs and feet, cere, and orbits, are in the adult birds yellow, but become bluish grey when preserved as specimens. In immature birds these parts are naturally of a dull blue, tinged with green.

In plumage the females differ little from the males, but the brown marks upon their feathers are larger and darker. They exceed the males in size.

In young birds the whole of the upper parts are cinereous brown with dirty-yellowish edges and spots; the under parts are yellowish-white, each feather marked with an irregular lancet-shaped spot, of a dusky colour, largest on the breast. In this state of plumage the beak is black; the cere, orbits and legs, dirty pale blue, the iris dusky grey; a dark streak descends from the corner of the beak down the side of the throat; this streak disappears as the bird becomes older.

The egg figured 7, is the one belonging to the Jer Falcon.





Pl. 8.

PLATE VIII.

PEREGRINE FALCON.

FALCO PEREGRINUS. (Linn.)

THE Peregrine Falcon is a very courageous, powerful, and active bird; qualities observable at first sight in his strongly built form and brilliant eye. His flight is rapid, with quick movement of the wings: he is rarely observed to sail, but is usually seen skimming near the ground. On rising, he expands his tail, and flies in a slanting direction for some distance before he mounts in the air. When on the wing, he is easily distinguished from other birds by his fine proportions, his narrow tail, and long and pointed wings. When sitting at rest with his neck shortened, and the white feathers of his breast spread over the shoulders of the wings, the black streaks which descend from the corners of his mouth, contrasting with the white colour of the throat, render him a striking and conspicuous object.

This Falcon is a shy and wary bird, and difficult to approach unobserved. His favourite haunt for resting at night is the high branch of a lofty forest-tree, and pine-forests seem to be preferred; to such places he retires about sunset. Sometimes he is seen in the open fields, seated upon a stone, rock, or hillock, where he quietly waits, watching for his prey.

The voice of the Peregrine Falcon is loud, clear, and

sonorous. These birds build their nest in the highest pine-trees ; sometimes, also, in the fissure of a precipitous rock. Both male and female may at times be seen over the place chosen for nidification, wheeling in circling flight. The nest is a flat structure, composed of dry sticks, on which the female deposits three or four eggs ; and three weeks is the length of the period of incubation. During this time the male seeks food for himself and his mate within the limits of the forest ; rooks, pigeons, and other forest breeders, become at this time his prey. He is also a great enemy to grouse, ptarmigans, and partridges, and when once a covey of the latter is discovered, there remains but little chance for the escape of any of them from his persevering returns to the spot they frequent. In more northern countries, the Peregrine is said to attack the capercaillies, notwithstanding their great size, and to consume them in great numbers : and he is so fastidious that he never resorts a second time to the prey that he has left, which renders him more destructive than he would otherwise be.

Another circumstance that brings upon the devoted Peregrine the charge of destructiveness, is the fact, that various birds, less courageous and less successful in the chase than he is, habitually rob him of his prey.

The buzzard sits quietly upon a rock or a stone, watching with eagerness the motions of this hawk, when engaged in the pursuit ; as soon as he has taken his prey and alighted on the ground for the purpose of devouring it, he is driven away by the buzzard, to whom he resigns it without a struggle, and takes to flight. However hungry, he is never seen to defend himself, or dispute his right. The rough-legged buzzard, and even the harrier, rob him in a similar manner. Nevertheless, the Peregrine displays both courage and address in frequent contests with his equals.

The food of the Peregrine Falcon consists entirely of birds, which are plucked clean before they are devoured. He attacks indifferently all kinds from the size of the lark to that of the wild-goose. Reptiles are never taken by him. His prey is always captured when on the wing, by out-soaring and pouncing upon his victim; he cannot take birds from the ground, nor does he venture to pounce upon such as are skimming near it, as he would endanger his own safety. Pigeons are well aware of this, and may often be seen to fly cautiously close to the ground when a hawk is in sight.

The Peregrines, as well as all the other noble birds of prey, destroy their victims instantaneously, by attacking it in a vital part.

The Peregrine Falcon is met with all over Europe, and in the northern parts of Asia, Africa, and America. It is indigenous in England, inhabiting especially the more hilly districts. "From its nature," says Montagu, "the Peregrine Falcon is limited to certain districts, choosing only the mountainous parts, where it can settle on the shelving rock of some stupendous cliff, and breed in security in the midst of plenty. From this circumstance, this species appears less plentiful with us than it really is, there not being on any part of our coast, from north to south, a spot where the cliffs rise to the height of three or four hundred feet, but they are found scattered during the breeding season, and from which they seldom retire, except for occasional migratory purposes, or when the young are driven to seek fresh quarters."

The Peregrine holds the next rank to the Jer Falcon in estimation for falconry; his strength, courage, and aptitude to receive instruction rendering him for this purpose a valuable bird. Formerly, when falconry was much esteemed, considerable care was taken with the education, treatment,

and feeding of these beautiful birds, and large sums expended for that purpose. They were used, and still are, where this sport is exercised, for flying at herons, partridges, &c.

The birds represented in the plate, are an adult female in the lead coloured plumage proper to maturity, and a young male.

The entire length of the male Peregrine Falcon is fifteen inches; of the female seventeen. The following dimensions were taken from the female figured in the plate:—the length of the wing from the carpus to the tip fourteen inches; of the tarsus two inches. The beak of the Peregrine Falcon bears a strong resemblance to that of the Jer Falcon, except that the prominent tooth of the beak is not so strongly developed; it measures from the forehead to the tip one inch and a quarter in diameter, or an inch and a half following the arc. The legs and feet also much resemble those of the Jer Falcon in size, and in the number of the scales upon the toes. The wings, when closed, reach nearly to the end of the tail: the second quill a little exceeds the first in length, and is the longest in the wing: the tail is nearly square.

The adult male and female are very much alike, except in size. The older this bird becomes the paler are all the under parts of his body, the transverse bars on the breast and flanks become narrower, the reddish tint disappears, and the white ground colour becomes tinged with pale bluish ash, particularly on the sides and thighs; the upper plumage also acquires a darker shade. The young birds are quite differently coloured from the adult, as may be seen in the brown bird delineated in the plate, which represents a young male of about a year old, before the autumnal moult. Its near approach to maturity was indicated in this specimen by one

or two new feathers among the side-coverts of the tail, which were grey, barred with black, as in the adult. At this age the beak is pale blue ; the cere, orbits, corners of the gape, and legs, greenish yellow.

Number 8 is the egg belonging to this Falcon.





PLATE IX.

THE HOBBY.

FALCO SUBBUTEO. (*Lin.*)

THE HOBBY is an inhabitant of the warm and temperate parts of Europe, Asia, and probably Africa. In Europe its northern limit appears to be the most southern parts of Sweden and Siberia, and the central portions of Russia. In England it does not appear to be met with further north than Northumberland, although on the continent of Europe it possibly reaches a higher latitude; but although widely diffused this species is not considered anywhere to be very numerous.

The Hobby is an elegant little bird, and greatly resembling the Peregrine Falcon in the distribution of its colours. Through all its actions it displays great acuteness, perseverance, courage, and quickness. It flies with great buoyancy and speed, and may readily be distinguished when on the wing from the Kestrel and Merlin, by its narrow pointed wings, and slender form. When at rest, perched upon a stone, or clod of earth, or sitting upon a naked branch of a decayed tree, it is readily known by the marked character of its plumage, its white breast and throat, and the dark bands that descend from the corners of the beak.

The Hobby is found in mountainous as well as in flat countries, and appears to prefer copse wood and thickets in the neighbourhood of fields and open commons rather than forests. In England it arrives in April, and in September

or October is again on its retreat to warmer latitudes. The Hobby chooses for its prey larks, swallows, and martins, which he pursues in the air, following them easily in all their rapid evolutions, and strikes with such unerring aim that he seldom fails to secure his selected prey: even the swift cannot escape him. He takes also quails, young partridges, sandpipers, and plovers, when on the wing.

The male and female hunt together, but are said sometimes to quarrel for what they have caught, and suffer their prey to escape from them. The martins are so terrified at their approach, that they throw themselves upon the ground for safety. Larks are equally disturbed at the sight of their mortal enemy, but instinct teaches them sometimes to seek their safety by rising hastily into the air, where they are secure unless their enemy rises above them.

The Hobby will occasionally follow sportsmen when shooting with their dogs, and skimming along without any apparent motion of the wings, will pounce like lightning upon the larks or other small birds that, startled by the approach of the dogs, rise upon the wing. He also chases cockchafers, grasshoppers, and other large insects, and pursues them until late in the evening; sometimes he is seen, like the Nightjar, chasing insects over ponds and rivulets when nearly dark. On this account the Hobby retires late to rest, and is not among the earliest risers in the morning, many birds having finished their morning song before he makes his appearance from his nocturnal retreat in the woods.

The Hobby builds in forests and woods, always selecting a lofty tree. In one of the upper branches in such a spot the nest is constructed, which is built of dry sticks, and lined with cows' hair, moss, and other warm materials. Sometimes a hole in an aged tree is chosen as affording a sheltered retreat. If not disturbed, the same birds sometimes return to their haunt in the succeeding year. The female deposits three or four

eggs, which, like those of other Hawks, are hatched in three weeks. The young are fed with small birds and insects, and remain for some time in the neighbourhood of the nest. Sometimes the young are seen catching the grasshoppers that make their appearance among the tops of the long grass; and when old enough to fly they follow their parents to the field.

This courageous and docile little Hawk may be trained to catch quails, larks, and other small birds. In confinement it becomes very tame: it requires to be carefully kept during the winter, to protect it from the rigours of the climate, not suited by nature to the delicacy of its frame. Hobbies, from their shyness in a wild state, are difficult to approach, but they may sometimes be shot when in the ardour of pursuit they venture, as before mentioned, too near the sportsman, whose dogs they are following in order to share in the started game.

The note of the Hobby resembles somewhat the call of the Wryneck, and in the spring may occasionally be heard.

The Hobby represented in the plate is a male bird in adult plumage. When very old this bird is said to lose entirely the dusky spots upon the thighs and under tail-coverts, those parts acquiring a fine plain rust colour; at which age the upper parts of the plumage become steel blue, without any bordering to the feathers.

The full grown male bird is about twelve inches in length; the tail, whose feathers are of equal length, measures about six inches; the wings, when closed, reach beyond the tip of the tail.

The beak is blue, tipped with black, short, and sharp pointed, and measures seven lines in diameter, and nine lines in the arc; the cere, eyelids, and feet are yellow; the iris is chestnut brown. The tarsi are short, measuring about an inch and a half, and feathered below the knee; the toes are long and slender.

The adult female is nearly the same in colouring as the male, but larger in size, exceeding him by about an inch and a half in length.

The young birds have the legs paler in colour; the cere and orbits almost white, sometimes intermixed with blue; the head, neck, and all the upper parts are dusky, with rust coloured and yellowish edges.

The egg figured 9 in the plate is that of the Hobby. Some of the eggs of this species, as described by Montagu, are bluish white, with olive green or yellowish brown blotches.



9.



8.



7.





Pl. 10.

RAPTORES.

FALCONIDÆ

PLATE X.

ORANGE-LEGGED HOBBY.

FALCO RUPIFES.

THE Orange-legged Hobby is found in many of the temperate parts of Europe, from the forty-third to the fifty-third degree of north latitude: it is of rare occurrence in the western, but is said to be common in the eastern countries of Europe, and in Siberia. It is often seen in Russia, Poland, Hungary, and Silesia. It appears sometimes in Switzerland, and occasionally, but very rarely, in France. In England it is considered of very rare occurrence, a few specimens only having fallen into the hands of persons acquainted with this branch of natural history. These specimens, which were first recorded by Mr. Yarrell, were shot on the eastern coast of England, in Norfolk; and one has since been met with in Ireland.

According to my own observation, the Red-legged Hobby has appeared in this country since the period last recorded, namely 1832; and it is possible that when further investigation is made on the subject, it may be found not to be of such rare occurrence as it is at present supposed to be.

I have more than once seen this bird, but have not been so fortunate as to obtain possession of it. On one occasion, in the summer of 1838, I was late one evening walking in the unenclosed plantations belonging to Claremont, and was carefully searching for Plovers' eggs on a boggy heath, on

which I knew they were sometimes found, when my advance roused from the ground a bird, whose peculiar flight instantly arrested my attention, and I followed it as far as the enclosure of the plantation into which it had entered would permit. I presently perceived it sitting upon the branch of a tree, in company with another bird of similar size, but differing in colour. I was near enough to observe their plumage, and no doubt remained upon my mind respecting them,—they were Orange-legged Hobbies. They presently took to flight, but did not leave the plantation, which was of young larch, and other fir-trees; their manner of flying was peculiarly buoyant and graceful, with frequent turns and evolutions, as if in pursuit of some aerial prey; it was now dusk in the evening, and I watched them until they could no longer be perceived. It was in summer, and I conjectured that they must have a nest in some part of the copse. I returned several evenings to the same spot, and saw them again and again. I was extremely anxious to obtain the nest, if such existed, which I do not doubt, considering the season of the year, and the fact of their being seen in the same place several successive evenings.

Claremont being strictly watched by the King of Belgium's keepers, it was only through their interference and assistance that I could hope to obtain my object, and I accordingly applied to them; but such is their illiberality and extreme jealousy of the interference of a stranger, that I could not prevail upon them to take any trouble in the search, although I offered a liberal reward for the birds, and for any indication of their nest; nor would they permit me to resume the search myself. This was in the summer of 1838: since this period I have had a circumstance detailed to me of the capture of a little bird of the hawk species, which could be no other than the one at present under consideration. A young friend, who himself related the cir-

circumstance to me, had a hawk brought to him of a kind that he had never seen before ; it had been observed, by one of the before-mentioned keepers of Claremont, to enter a hole in a tree at eleven or twelve feet from the ground ; the man had with him an active little boy, who, climbing up the tree, succeeded in securing the bird. The keeper had never seen a bird of the sort before, although well acquainted with the other small species of hawks which abound in that part of Surrey. My young friend described it as extremely small, very dark in colour on the upper parts of its plumage, and with red or orange-coloured legs, and whitish claws ; it sat remarkably upright on its perch, so as to give an impression that it would fall over backwards. It ate voraciously such food as was offered it, but was so extremely wild, that, fearing he could never succeed in taming it, or reconciling it to its cage, after keeping it about a week, he determined to give it its liberty, being unconscious of the rarity and value of his captive. On opening the door of its cage it flew off with incredible swiftness, and was presently lost to sight. Wishing to ascertain more exactly the appearance of this bird, I showed my young friend various drawings of hawks, and other birds, and he immediately pointed out, without hesitation, the female of the Orange-legged Hobby. It was in the middle of the summer of 1840 that this bird was captured. The fact of its being seen several times in the middle of summer, leads to the supposition that some few pairs may occasionally breed in England ; and it is not impossible that the bird which was caught in a hole in a tree had chosen that locality for the purposes of incubation ; we are the more inclined to this opinion, as it has been conjectured by several naturalists that such a situation is chosen by this species as a breeding place, although nothing certain is known on the subject of the nest and eggs, which have not hitherto been described, that we are aware of. These remarks, crude as they

may appear, are hazarded in order to draw attention to a subject which it may possibly yet be in the power of some British naturalist to set satisfactorily at rest.

The appearance of this species in the south of Europe, Monsieur Temminck considers to be accidental. It is probable, he says, that it is drawn towards the coasts of the Mediterranean by the accidental migration of the insects that form its customary food. Monsieur Roux also says that its appearance in Provence is not sufficiently frequent to allow it to be ranked among the birds of passage of that country.

This falcon is said to be chiefly observed, in countries where it abounds, in copse-wood, or in open level ground interspersed with bushes; sometimes it is seen seated upon the dead branch of a tree. Its food is known to consist chiefly, if not entirely, of insects of the coleopterous order, crickets and grasshoppers, as the remains of such insects alone have been found in the stomachs of specimens that have been dissected. In pursuit of these nocturnal insects, the Orange-legged Hobby is seen skimming over marshy spots late in the evening, occasionally uttering its peculiar and musical call-note.

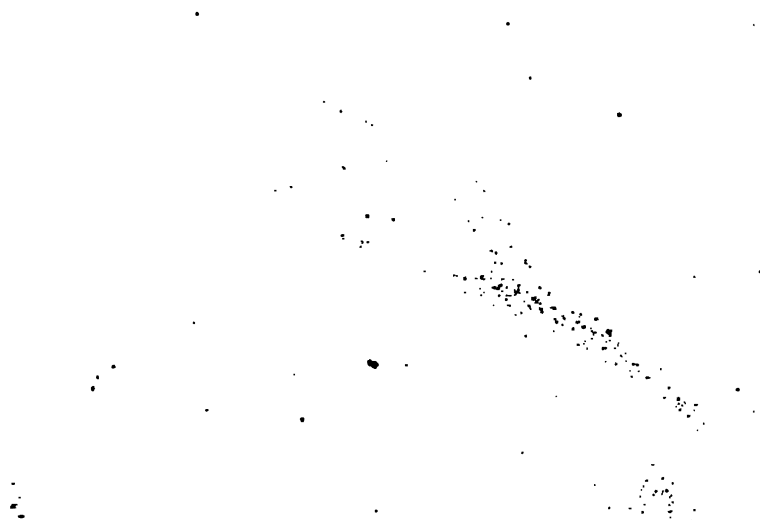
These particulars of the habits of the species perfectly agree with my own observations with the locality in which I have seen them, and their supposed occupation.

The figures represented in the plate are an adult male, and a young bird about a year old.

The male measures ten and a half or eleven inches in entire length; the wings, from the carpus to the tip, are nine inches; and reach, when closed, to the tip of the tail. The beak measures six lines in diameter from the forehead to the tip, and four lines and three-quarters in thickness at the base; it is sharp pointed, and has a prominent tooth, but the upper ridge is not much arched. The wings are long

and pointed, the second quill-feather the longest, the first and third nearly of equal length. In the adult male the feathers of the thighs, vent, and under tail-coverts, are bright orange brown; the rest of the plumage is uniform slate colour, palest on the breast and sides. The legs and feet, orbits and cere, are orange red; the claws whitish flesh red; the iris dark brown; the beak blue, tinged at the base with yellow.

The adult female differs very materially from the male; on the mantle, scapulars, wing-coverts, and tail, her plumage has the same slate grey as in the male, but the feathers on these parts are barred with black: the forehead is whitish; the crown of the head pale rufous, the back of the neck is darker rufous barred with black; the throat and sides of the neck are yellowish white; the breast, belly, and thighs, are rufous brown, marked with a few longitudinal streaks down the shafts of the feathers, which marks are said to disappear with advanced age. The grey tail is crossed above with seven or eight dusky bars, the last near the extremity of the feathers the broadest, the tips are greyish white; the tail-feathers beneath are pearl white, showing the dusky bars through them; the under tail-coverts are white, clouded with rufous; the moustache and region of the eyes are blackish. The legs, orbits, beak, and cere, as in the male. The very old females are said to become paler on the under parts, the upper parts lighter grey, and the black bars narrower.





N. n.

PLATE XI.

KESTRIL.

FALCO TINNUNCULUS.

THE KESTRIL is a bird of prey well known all over Europe. In America and in Asia it is also equally common. In Africa they abound, even as far as the Cape of Good Hope. In Europe, says Temminck, this species is not usually found beyond the regions of the arctic circle; its place being supplied in those countries by the Merlin. It appears to prefer rocky and mountainous localities to woodland, on account of its preference for the fissures and holes in rocks for the purposes of nidification and shelter: it is not, however, confined to such localities, but is found in greater or less abundance in all situations.

From its general distribution, its peculiar appearance when on the wing, and the little fear it appears to entertain for man, it is more frequently seen and better known than any of our indigenous Hawks.

When engaged in searching for its food, it will suffer the very near approach of an observer without showing any alarm or desisting from its employment, and continue at the elevation of a few yards from the ground with outspread tail and stationary, except the occasional tremulous flickering of its wings; then, as if suddenly losing sight of the object of its search, it wheels about and shifts its position, and is again presently seen at a little distance suspended and hover-

ing in the same anxious search. We have occasionally watched a pair thus pursuing the chase together, for a considerable time.

Field mice are believed to constitute the chief food of the Kestrel; but they occasionally take birds. They also pursue cockchafers and other flying beetles, which they devour upon the wing. Frogs and lizards become also their prey.

The nest of the Kestrel may be found in crevices of rocks, or holes in high banks, in church towers, and in ruins: where such places are not to be met with, a hole in an old tree is chosen, or even a deserted nest of sufficient size. The eggs are frequently deposited in the bare cavity, at other times a few straws or loose feathers are brought to the spot. The female seldom deposits more than four eggs; these are of a roundish form, much resembling those of the Merlin in size and shape; they are rust yellow, spotted all over with brownish red, sometimes entirely brick-red, mottled with a deeper tint. The partiality of this species for towers and ruins as resting or breeding places has given rise in several countries to its local name. In Italy it is called *Falco di Torre*, and in Germany *Thurmfalke*, both signifying Tower Falcon. One of its provincial names in England is *Kastril*, which seems also to admit of the same interpretation.

The young Kestrels are at first covered with a greyish white down. Before they leave the nest they have acquired a garb resembling that of the adult female. At this age there is but little difference in size or colour between the sexes, but the bars upon the feathers of the females are rather broader and less distinctly marked than in the males. Four young ones, which had just been taken from the nest, were brought us; they were fully feathered, and scarcely any difference of plumage could be discerned among them. In

this plumage they remain until the summer of the following year, when an alteration may be perceived in the colouring of the male, even before the commencement of the autumnal moult. The tail acquires a hoary grey colour near the base, the upper tail-coverts also partake of the same hue; when the moult takes place the brown barred feathers of the tail are exchanged for the characteristic grey ones; and subsequently the head also acquires the same colour. The barred feathers of the upper plumage give place to feathers of a brighter and fuller tint, and the black marks only remain in the form of a diamond-shaped spot near the tips of the feathers. These marks at the succeeding moult become smaller, and eventually disappear entirely upon the mantle. The irides of the adult Kestrel are rich brown; when young, they are dusky with a tinge of grey; the legs and feet are stout, lemon yellow in the adult birds, as well as the cere, eyelids, and orbits, paler in the young birds; the claws are bright black and very sharp.

The beak of the Kestrel is rather long and slender, and compressed towards the tip, of a pale blue colour tipped with dark horn. The wings reach within about an inch and a half of the tip of the tail, and measure about nine inches from the carpus to the tip. The first quill-feather is three-fourths of an inch shorter than the second and third, which are the longest in the wing; it is very deeply notched on the inner web. The quills are dusky on the upper surface, greyish white beneath, barred with a darker grey.

The tail-feathers are tipped with cream white, above which is a bar of brilliant purple black, occupying the space of about an inch and a quarter; and the middle tail-feathers are about an inch longer than the outer ones. The breast and belly are white, tinged with reddish ochre, and marked with dusky spots in the centres of the feathers; the thighs and vent are without spots.

The moustache upon the sides of the face is conspicuous in both male and female.

The Kestrel is easily reconciled to captivity, and becomes extremely tame. One that we reared from a nestling exhibited the utmost docility and attachment to the persons it was accustomed to see. It lived on terms of perfect friendship with many small caged birds, and although the perch to which it was fastened by a chain often stood within reach of their cage, it never made the smallest effort to molest them.

This pretty creature would suffer itself to be caressed, and even appeared pleased with attention, and certainly looked upon us as its protectors. It always evinced great alarm at the sight of a black cat, which frequently entered the garden where it stood, in order to snatch from an aviary such of the small birds as should venture near the wires, and several luckless goldfinches did fall into its power. On the appearance of this terrible enemy, our favourite Hawk would utter redoubled cries until some one ran to its assistance; but if any of its human friends happened to be in sight, it took no notice whatever of the intruder, as if perfectly secure when in our presence.

The egg represented in the plate, and numbered 11, belongs to the Kestrel.





Pl. 12.

RAPTORES.

FALCONIDÆ.

PLATE XII.

MERLIN.

FALCO ÆSALON.

THIS beautiful little bird, although widely distributed throughout all the warm and temperate parts of Europe, appears to be nowhere very abundant, especially in this country, if we may judge from the various conflicting accounts of ornithologists and other observers respecting the season of its appearance in different parts of England, the locality it chooses for nidification, the colour of the eggs, and other particulars.

Bewick, although inhabiting the northern part of England, where it is now known to breed, describes the female of this species as the Merlin; and the adult male, which he considers a different species, under the designation of Stone Falcon. This error has long since been set at rest; but other discrepancies still exist respecting some portions of its history, which prove that the opportunities of observing its habits are not very frequent.

The Merlin may be distinguished from the Hobby when flying by its less slender form, and by the greater length of the tail in proportion to the wings. The same difference exists between the Merlin and the Kestrel, the latter having a still longer tail and slower movements.

In character the Merlin is courageous, extremely wild, and shy. Although of small dimensions, this spirited little Hawk frequently attacks birds much larger and stronger than itself. Its usual prey consists of larks, swallows, linnets, chaffinches, goldfinches, and other small birds that live much on the wing: thrushes and plovers sometimes become its prey, and it is said to take quails and young partridges when it can surprise them flying, but it is not able to take birds of this size from the ground. It also, in common with other small Hawks, feeds upon cockchafers and other flying insects. When in pursuit of its prey in the open moors, in which it delights, the Merlin may be seen flying from stone to stone watching the larks and other small birds that frequent such situations. This habit of resting upon a stone has obtained for him in several countries appropriate names synonymous with its common English appellation—Stone Falcon.

The Merlin is indigenous in some of the northern counties of England, also in Scotland and the Scottish Isles. Monsieur Temminck, in the fourth volume of his *Manuel d'Ornithologie*, says the Merlin rarely breeds in the temperate parts of Europe, and only in the most elevated regions. During the breeding season, he observes, it inhabits Sweden and other northern parts, the rocky districts of Norway, and the island of Bornholm in the Baltic, and extends beyond the region of the arctic circle. In England, according to Mr. Selby, it breeds in the extensive upland moors of Northumberland, where he has frequently met with its nest placed in all instances upon the ground amongst the heather. The eggs of the Merlin, according to the same authority, are of a bluish white colour, marked with brown spots, principally disposed at the larger end.

The eggs appear subject to variation in colour: the one

we have figured, which is from the cabinet of Mr. Yarrell, differs from those described by Mr. Selby, but agrees perfectly with the description Bechstein gives of the eggs of this species. According to Montagu, the Merlin does not visit the south of England until October, about the time that the Hobby retires; but we have reason to think that in some few instances this species passes the summer months more southward than the limits assigned by most authors, as we have received from Suffolk eggs perfectly resembling Mr. Yarrell's specimen.

That this bird is capable of enduring a high degree of cold we may conclude from the assertion of Monsieur Temminck that it is commonly found beyond the limits of the arctic circle.

The adult male Merlin is from ten to eleven inches in length, and weighs five or six ounces. The wing from the carpus to the tip measures seven inches and a half; the tail extends an inch and a quarter beyond the points of the closed wings. The beak measures seven lines in length, and is not so much curved as in the preceding species; it is strong, and with the tooth prominent. The upper parts of this bird are of a fine blue stone colour, including the crown of the head, the back, scapulars, wing-coverts, and tertials. The crown of the head is streaked with black down the shafts of the feathers; the blue feathers of the upper plumage have also black shafts. The blue tail has a broad black band near the tip, and the specimen from which the plate was taken bore traces of three interrupted black bars; the tail-feathers are tipped with cream white. The primary quills are dusky above, paler, and barred with white, beneath. The second and third quill-feathers are the longest in the wing; the first is a little shorter than the fourth; the first and second feathers are strongly notched on the

inner web, the second and third sinuated on the outer web. The forehead and throat are white; round the neck is a reddish brown ring spotted with black; the cheeks are the same above and below the eye is pale reddish white; from the corners of the mouth run a few black streaks pointing downwards, indicating the characteristic moustache which all true Falcons possess in a greater or less degree. The under wing-coverts are yellowish white with dusky spots and streaks. The under plumage is rufous, each feather upon the breast and flanks marked down the shaft with a dusky streak; the thighs are rufous with narrower streaks; the legs and toes, cere and eyelids are yellow; the beak is blue at the base and tipped with dark horn; the irides dark brown.

The female differs very much from the male; the grey colour which is so prevalent upon his plumage is only perceptible in hers upon the scapulars and wing-coverts, where it occupies the centre of each feather; these feathers are bordered with rufous and have black shafts. The greater coverts of the wing, and upper coverts of the tail, are brown, bordered with dirty yellowish white. The tail is greyish brown, tipped with yellowish white, and crossed with fine yellowish white bars. The throat is plain white; the ring round the neck, the breast, and under parts are yellowish white streaked and spotted with dusky; the nape of the neck and thighs tinged with rufous. The crown of the head and nape are rich reddish brown, with dusky streaks down the shafts of the feathers; forehead and streak above the eye yellowish white; the ear-coverts grey and brown.

The young male birds much resemble the female above described, but have no grey in the centre of the feathers on the upper parts, these being dark brown bordered with rufous.

The young females wear nearly the same dress as the young males, but they may be distinguished by their larger size. In young birds of both sexes, the legs, cere, and orbits, are greenish yellow.

The Merlin's egg is represented in the plate, and numbered 12.



11.



12



Pl. 13.

RAPTOR.

FALCONIDE.

PLATE XIII.

KITE.

Milvus forficatus.

THE KITE is not very numerous in Britain as a species, and but partially distributed; being tolerably abundant in some districts, and in others rarely seen. It is, nevertheless, a bird well-known, partly on account of its peculiar flight and appearance, which render it easily distinguishable from all other predaceous birds; and still more, perhaps, on account of its habits, which render it peculiarly obnoxious to man, from its partiality for the young of various species of game, as well as for the cherished nurslings of the farm-yard.

This species was formerly much more plentiful than it is at present; the increasing cultivation of territories formerly left in their natural wild state of moor or woodland, and the growing desire to preserve game, having operated upon this, as upon all others of the predaceous tribes, in decreasing their numbers, and limiting them to those localities that still remain in a state suited to their mode of life.

The localities now best known as the resort of Kites, are wooded districts in Cumberland, Westmoreland, and some parts of Yorkshire. In Scotland, according to Mr. Selby, it is more abundant, occurring plentifully in the vicinity of Loch Katrine, and Loch Awe, as well as about Ben-Lomond. It is partial to the neighbourhood of lakes and rivers, the

waters of which supply a considerable portion of its customary food. It is also found in Wales.

The Kite is considered a heavy and sluggish bird, and its appearance when perched might seem to justify that opinion, but for a restlessness in its brilliant eyes, and a sinister expression of countenance, that seem at variance with a dull and heavy character; and even in confinement, when moving about its cage from perch to perch, the Kite exhibits a lightness, grace, and ease of motion, that prepare the observer to expect the buoyancy of flight and power of wing that so eminently characterize its actions in a state of liberty.

The length of wing possessed by this species gives an expanse greatly disproportioned to its weight, which does not exceed two pounds and a half, and enables the bird to sustain itself for a great length of time in the air without fatigue. Its flight is slow and graceful; for hours it may be seen floating in the air with little movement of the wings; its tail is, however, continually in motion from side to side, directing the movement of the body. It sometimes rises to a great elevation, in slow and repeated circles, mounting and soaring until lost to sight.

The elevation to which some species of birds rise is truly astonishing. Humboldt, observes Mr. Kirby, says that the Condor soars to the height of Chimborazo, an elevation almost six times greater than that at which the clouds that overshadow our plains are suspended.*

This power of rising to such surprising elevations, is chiefly attributable to the means with which birds are endowed of receiving air at pleasure into certain parts of their bodies. Mr. Kirby, speaking on this subject in the interesting work before referred to, says, "Of all animals, birds are most penetrated by the element in which they move; their whole organization is filled with air, as the sponge with water; their

* Kirby's Bridgewater Treatise, vol. ii. p. 473.

lungs, their bones, their cellular tissue, their feathers,—in a word, almost every individual part admit it into their interstices ; thus giving them a degree of specific levity that no other class of animals is endowed with : which, however, does not render them the sport of every wind that blows, for by means of their vigorous wings formed to take strong hold of the air, of their muscular force, the agility of their movements, and their powers of steerage by means of the prow and rudder of their little vessel, their head and tail, they can counteract this levity.” Rennie enters further into this subject ; he says, “The lungs of birds have several openings communicating with corresponding air-bags or cells, which fill the whole cavity of the body from the neck downwards, and into which the air passes and repasses in the process of breathing. This is not all : the very bones of birds are hollowed out with the design of receiving air from the lungs, from which air-pipes are conveyed to the most solid parts of the body, and even into the quills and plumelets of the feathers, which are hollow or spongy, for its reception. As all these hollow parts, as well as the cells, are open only on the side communicating with the lungs, the bird requires only to take in a full breath to fill and distend its whole body with air, which, in consequence of the considerable heat of its body, is rendered much lighter than the air of the atmosphere. By forcing this air out of the body again, the weight becomes so much increased, that birds of large size can dart down from great heights in the air with astonishing velocity.” *

Kites choose for their breeding-place forests, or copse-wood, without showing any decided preference for mountainous localities ; and are often seen in spring, rising in their beautiful and circling flight above these chosen spots, uttering their clear note of joy. The situation selected for the nest

* Insect Transformations.

is a lofty beech, oak, pine, or fir ; the structure is large, and formed of dry branches ; it is lined with straw, moss, or wool, or similar warm substances. The eggs, which are three or four in number, are white, clouded with a dirty greenish colour ; sometimes spotted, as they are represented in the plate, sometimes plain. Incubation lasts three weeks, during which time the female is assiduously fed and watched by the male bird. The nestlings occasionally betray their place of retreat, by the cries they utter whenever the parent birds approach.

The food of the Kite is of a very varied character, and consists chiefly of what can be taken from the ground ; such as young hares, mice, snakes, efts, frogs, and toads ; also grasshoppers and other insects. The Kite is a great destroyer of young ducks, geese, and poultry, when he can meet with them unprotected ; but not being of a daring character, except when much pressed by hunger, he is easily driven from the pursuit of them. Nevertheless, in defence of their own young when molested, the Kites display much boldness as well as affection. It has also been observed to take live fish ; and, in default of living food, carrion, and even dead fish, snatched as they float from the surface of the water, are not rejected.

The services of the Kite, however, in destroying obnoxious animals and removing offensive carrion, are overlooked or forgotten, when in an evil hour it comes within reach of the farmer whose poultry-yard has been robbed by this bold intruder ; the luckless carcass of which is henceforth doomed to grace the walls of the barn or cow-house, as many of its fellows have done before.

The Kite, although indigenous in Britain, and resident throughout the year, has been observed to shift its quarters from time to time according to the season.

On the continent of Europe, where it is found from south

to north, as far as Sweden and Norway, it is decidedly migratory, especially in the northern parts above latitude fifty-two or fifty-three degrees; retiring from thence to warmer regions as winter approaches, being unable to sustain the inclemencies of a northern winter.

According to M. Boié, the Kite is very common in Denmark, where numbers arrive in the spring; but a very small portion of these, however, remain during winter. Their migration is performed usually in flocks; sometimes from fifty to a hundred may be seen together. During these migratory flights they proceed along the open country, flying low, and from time to time settling on the ground to rest themselves, and in this manner slowly pursue their route. Many are supposed to winter on the southern side of the Mediterranean.

By Bechstein and other German authors this species is called Rother Milan, or the Red Kite, to distinguish it from another species which somewhat resembles it, but is much **darker in the tints of its plumage.** With us no such distinction is necessary; the Common Kite being the only bird of this species that is found here, with the exception of the rare straggler which forms the subject of the following plate.

The living specimen from which our Kite was drawn, was one of two very fine birds, male and female, kept in the menagerie of Mr. Cross, of the Surrey Zoological Gardens; in which excellent collection we have had the opportunity of sketching several birds not commonly to be met with.

The entire length of the male Kite is about two feet two inches, and the expanse from wing to wing five feet; the female is larger, measuring in length about two inches more than the male, and in expanse exceeds him by about six inches. The tail is broad, and much forked; the middle feathers measure about twelve inches; the outer, fourteen and a half or fifteen inches; the tips of the wings, when closed, reach nearly to the end of the tail. The beak is long, with

very little appearance of a tooth, consisting only of a shallow festoon ; the tip of the upper mandible rounded. The nostril is oval, and bordered by a fold on the outer edge. The beak is black at the tip, bluish towards the base, and in very old birds yellow ; the colour of the iris is silver-white, but acquires a yellow tinge in very old birds. The beak measures in diameter, from forehead to the tip, one inch and three-eighths, in the arc one inch and a half, and is only three-quarters of an inch thick at the base. The feet are small in proportion to the size of the bird ; the tarsi are feathered for about an inch below the knee, the naked part in front scutellated, and measuring together two inches and a half ; the outer and middle toes are united by a membrane.

The adult male bird has the entire head and throat whitish grey, lightest upon the forehead and chin, the shafts of the feathers black ; in some specimens the head inclines more to rufous than to grey. The feathers of the head and neck are acuminate, as well as those of the breast and tippet. The quill-feathers, and larger coverts of the wings, are blackish brown ; all the rest of the upper plumage reddish brown ; the central part of each feather dusky. The feathers of the breast and under parts are reddish orange, darkest upon the thighs ; those of the breast are marked down the shaft with a streak of fine black, bordered with white. The tail and upper coverts are of the same orange colour as the breast, with dark shafts ; the outer feathers dusky along the edge, and crossed with dusky lines ; the tail-feathers beneath reddish white, with seven or eight indistinct bars of a dusky colour, showing through from above. The female has nearly the same colour and markings as the male ; the variations admit of little distinctness in description, although when seen together the difference may be perceived.

In young birds of the year the feathers of the head and neck are less long and pointed, and are reddish, tipped with

white ; and the upper parts of the body are more rufous than in the adult. The effects of light and sunshine are particularly observable in the colours of this bird ; the bright rufous in the new feathers of the young birds of the year becomes very much faded, and changes to a pale yellowish rust colour, before the next annual return of the autumnal moult, which occurs about August.

These gradual changes of colour, from the effects of the atmosphere, from the wearing away of the edges of the feathers by friction, and from the daily increasing age of the birds, are the causes of the different descriptions of different authors, and of the varied appearances to be seen among cabinet specimens ; although, probably, all birds of the same species resemble one another in their respective stages of growth.

The egg, figured 13, belongs to the Kite.

RAPTORES.

FALCONIDÆ.

PLATE XIV.

SWALLOW-TAILED KITE.

NAUCLERUS FURCATUS.

THIS very rare species, a native of North America, has in two instances only been recorded to have visited Great Britain, driven probably by contrary winds from its periodical course of migration through the American States. The first of these occurred many years ago, in the year 1772, in Argyleshire, and the second in Yorkshire in 1805; since which period no instance of its capture is known to have occurred.

This elegant bird bears much resemblance to our common Swallow in its form and manner of flying, in the length and shape of its prolonged tail-feathers, and also in its manner of taking its prey, which is always captured and devoured upon the wing. By American authors we are informed that the evolutions they perform when on the wing in pursuit of their prey are remarkable for grace, ease, and rapidity. This consists chiefly of aerial insects, with which the countries they inhabit abound: they also feed upon reptiles, which they sweep from the surface of the ground, or take from the branches of the trees when passing along; but they are said in all cases to eat their prey while on the wing.

They are found in the warmer parts of North America; also in a similar latitude south of the equator, towards which they migrate at the approach of winter. They usually asso-



ciate together in flocks, and while on their migratory passages are seen travelling in large companies.

The loftiest trees are selected by this species for their place of incubation, in low and marshy situations. The nest is formed of sticks and coarse grass, and lined with warm materials. The young, in their nestling state before the appearance of their feathers, are covered with down of a yellowish colour: the plumage of the first year resembles that of the adult, but, as is usually the case in young birds, it wants the gloss and changing tints that play upon the plumage of the older ones.

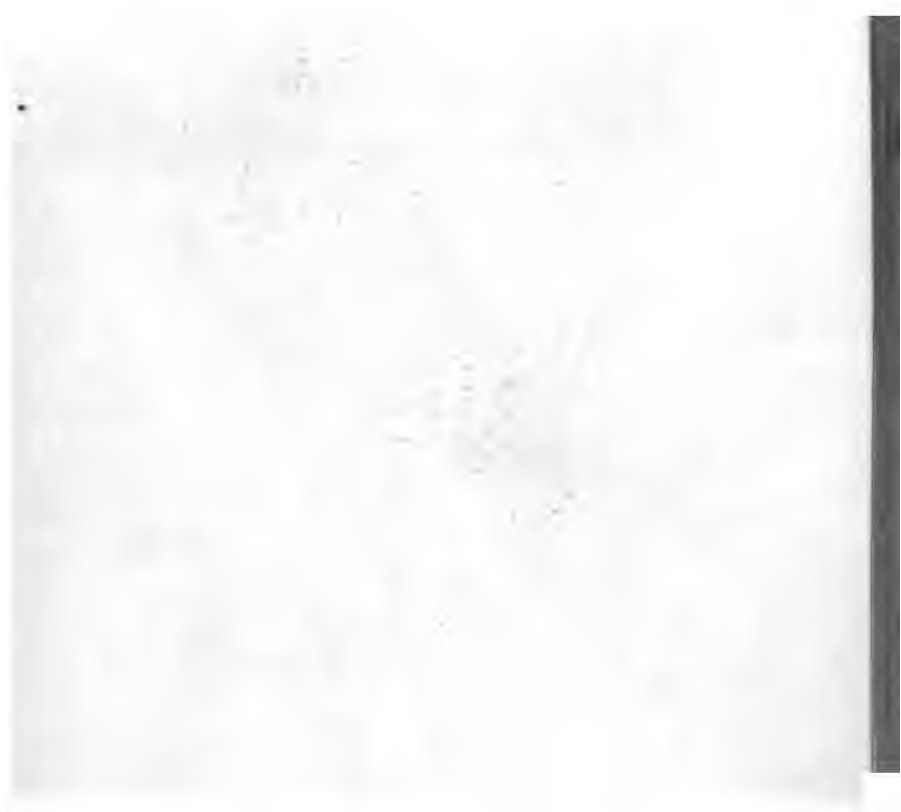
The eggs are said to be greenish white, marked irregularly at the larger end with blotches of dark brown.

The length of the Swallow-tailed Kite is about twenty-four inches; the wing from the carpus to the tip is sixteen inches, and the tail extends about three inches beyond the closed wings. The toes are entirely divided; the middle toe and claw measure about one inch and five lines, the hind toe and claw about one inch two lines, of which half is occupied by the claw.

The beak measures from the forehead to the tip one inch and one line in diameter, about two lines more in the arc; it is hooked and drawn to a fine point. The lower line of the beak, from behind the tip to the gape, is rather undulating than toothed; the nostril is oval, and the cere covered with radiating hairs. The legs are feathered half-way down the tarsus, the naked parts reticulated. The anterior joints of the toes are scutellated. The quill-feathers are long and narrow; the third a little exceeds the second in length, and is the longest in the wing.

The tail consists of twelve feathers, and is much graduated. The head and back of the neck, as far as the junction of the wings with the body, are pure white, as well as the whole under parts, from the chin to the under coverts of the tail

inclusive : a few white feathers are also perceptible along the inner line of the wing, where they are more or less covered by the scapulars. The whole upper plumage is a rich black, with purple, and green, and orange reflections, particularly on the scapulars and some of the tertials, towards the longest of the tertial feathers, which is white : the tail and upper coverts are black. The cere is described by Audubon as blue ; the legs are greenish blue, with the claws flesh colour.





11, 15.

RAPTORES.

FALCONIDÆ.

PLATE XV.

BUZZARD.

BUTEO VULGARIS.

ALTHOUGH included in the genus *Falco* of Linneus, the birds of this class differ from the Eagles and Falcons in many modifications of form, but still more in their character and manners. Although of large size and powerful form, they are cowardly and sluggish in disposition, and slow in their motions. In their manner of flying they bear much resemblance to the Owls, to which they approximate also in the softness and looseness of their feathers. They fly low, hardly above the level of the hedges, in search of their terrestrial prey; and are seen to visit the same fields daily, and frequently at the same hour, as if mechanically performing their accustomed route. Sometimes they sit concealed among the bushes watching lazily for their prey.

This species is of common occurrence in wooded districts, and in such situations it is very generally diffused throughout Europe. It is indigenous in England, and remains with us throughout the year. On the continent of Europe it is numbered among the birds of passage; even in Holland it is not at all times to be met with. Temminck speaks of them as arriving in autumn, and remaining only part of the winter in that country; at which time they disperse themselves along the downs that border the sea-coast. They migrate, he observes, in small companies, associated frequently with the

Rough-legged Buzzard. In Germany this bird is still more abundant than in Holland at particular seasons of the year, when pursuing their migratory course. At such times they are seen in flocks of more than a hundred: they fly slowly, and irregularly dispersed, sometimes rising and circling in the air, so that their passage is leisurely performed.

Those stragglers which arrive singly rest where they meet with a bush or shelter, and remain for days or weeks about the spot to recruit their strength, and then proceed on their voyage; and their places are supplied by fresh comers pursuing the same compulsory migration in search of food. In the corn countries of the Continent this bird is of essential use in destroying immense numbers of field-mice and similar depredators, which, but for this seasonable check, would destroy the hopes of the succeeding harvest. Yet, notwithstanding the disgusting food consumed by the Buzzard, which includes not only mice, but moles and carrion, this species is considered a great delicacy in some Continental countries, and eagerly sought after as an article of food.

The Buzzard is a short, stout bird, with large and broad wings: he is generally seen flying low, and resting from time to time upon a little eminence, watching for mice or moles, or he may be seen perched upon the branch of a tree. He wants the energy to pursue flying birds, and is said not even to catch partridges or pigeons, unless they are sick or weak. We are, however, disposed from observation to think that the Buzzard sometimes displays more energy than is attributed to it. One, which is frequently about in this neighbourhood, and appears to have nestlings in a wood at a little distance, has several times shown a disposition to sweep off one of a young brood of black turkeys now about the size of partridges.

In his search for moles, the Buzzard is said to show much sagacity. In his usual patient manner he sits upon a stump,

or upon the earth, near the mound inhabited by this quadruped, and watches for the stirring of the soil: as soon as he perceives a movement, he pounces with both feet upon the mound, and if successful drags forth the unfortunate animal and devours it.

Whether in thus destroying moles the Buzzard deserves to be considered as the friend or the enemy of the agriculturist is a doubtful question, for the able discussion of which we must refer our readers to the highly interesting account of that extraordinary animal in Mr. Bell's admirable work on British Quadrupeds.

The partiality of the Buzzard for moles, and the means employed for capturing them, explain the reason of this bird being often found with its feet covered with mud and earth. Field-mice are also a favourite repast with the Buzzard, and seven or eight have been found in the stomach of a dissected bird. Besides the above-named articles of food, this species preys upon young hares and rabbits, rats, frogs, and snakes, also upon birds and insects.

These birds pair early in March, and about this time are seen sporting in circling flight above their retreat in the manner pursued by many other birds at the same season. The place chosen in which to construct their nest is a lofty fir, oak, or other forest-tree of similar size: the nest is flat, and consists of sticks lined with moss or hair. Frequently, to save the labour of constructing their nest, these indolent birds take possession of the old habitation of some other bird, or repair their own nest of the preceding year. The eggs are usually three, and the young birds when hatched are covered with a whitish down. They are assiduously fed and tended by the parent birds, and remain a long time in the nest, and after quitting it require still, for a considerable period, the parental care of the old birds.

No birds vary more in the colour of their plumage than

the Buzzard. Brown, white, and grey, are the prevailing tints, and these are variously disposed upon different individuals, so that hardly any two birds are alike. These differences are said not to depend upon the different ages or sex of the individuals. The old birds can only be distinguished from the young, when dissected, by the toughness of the sinews and hardness of the bones. As little as these different colourings have to do with age or sex, so little can they be considered as indicating different species; since, with exception of colouring, these birds resemble one another perfectly, and breed together: the young of such parents partly resemble the male, and partly the female. The individual from which the plate was taken, represents the most usual colouring of the common Buzzard. This may be distinguished at a little distance by the bars that cross the body above the thighs. Temminck considers the Buzzards to differ as much in the colours of their plumage as the Ruffs. They may, nevertheless, be divided into three or four principal varieties; one of which resembles in a great measure the one figured in the plate, has the entire colouring dark brown, with lighter borders to the feathers, except the lower part of the breast and the inside of the thighs, the feathers of which are barred with alternate bands of dark brown and white; the under tail-coverts and inside of the wings barred in a similar manner. Birds of this description have the cere and legs full yellow; the beak grey, tipped with black; and the iris of the eyes reddish brown. A still darker variety is sometimes seen, which, at a little distance, appears perfectly black: The entire plumage of this variety is a dark chocolate colour, the tips of the quill-feathers black, and the dark feathers of the tail crossed by narrow lines of ash-colour. Buzzards of this sombre colouring have the cere and feet dark in proportion, approaching to orange; the iris is also of a fuller brown than in the preceding.

A beautiful variety, of which there is a specimen in the Zoological Museum, is also occasionally seen, but is comparatively rare. The ground of the plumage in this variety is white, tinged in various parts with yellow. The head is marked down the centre of the feathers with narrow streaks of brown; a few of the feathers on the breast are marked with arrow-shaped spots of the same colour, the smaller coverts of the wings the same. The quill-feathers are dark brown towards the tips; the tail is crossed on a white ground with dark brown bars seven or eight in number, the bar nearest to the white tip broader than the rest. In the white variety the eyes also partake of the light colour of the plumage, and are pearl-coloured or greyish white: the cere and feet are also lighter in the same proportion, being a pale lemon-yellow.

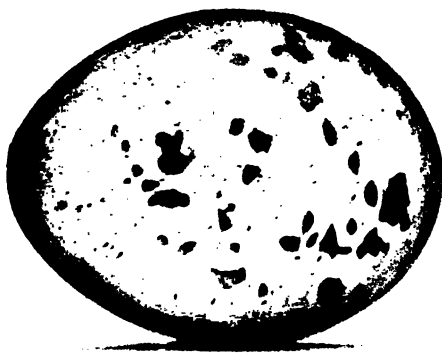
In all specimens of the Buzzard the bars that cross the tail appear the only permanent marks, which are found equally in all the varieties, differing however in number from six to twelve.

The entire length of the Buzzard is twenty-one or twenty-two inches, and in breadth about four feet six inches. The beak is long in proportion to its depth, and its form does not indicate much strength; the upper mandible is rather sinuated than toothed, but the point of the tip is sharp and prolonged. The legs are rather short, the tarsi scutellated in front; the toes are scutellated about half their length, the rest towards the junction with the leg reticulated: the middle toe has eight scales, the outer five, the hind and inner toes four. The claws are not much hooked. The tail is square, and the wings reach nearly to the end of it; the fourth quill the longest.

The head is large, and the whole aspect of the bird heavy. The egg, marked 15, belongs to the Buzzard.



13.



15





N. 16.

RAPTORES.

FALCONIDÆ.

PLATE XVI.

ROUGH-LEGGED BUZZARD.

BUTEO LAGOPUS.

THE Rough-legged Buzzard is found in nearly all parts of the world, and in all latitudes, from the southern parts of Africa to the Arctic circle. These northern regions are, however, only visited during summer or the breeding season, and deserted on the approach of winter: this species is, consequently, less stationary in its place of residence than the common buzzard, being in the northern a summer, and in the equatorial countries a winter visiter, and chiefly known in the central parts of Europe during its vernal and autumnal migrations.

In England, the Rough-legged Buzzard is much less common than the preceding species; it has, however, been met with occasionally at all seasons, and although most frequently seen in spring and autumn, has been observed in winter by Mr. Selby, and has also been seen in the summer in Yorkshire, where it has been known to breed.

Open country, interspersed with wood and marshy land, is the favourite resort of this species: in such places it may be seen sitting with drooping wings and ruffled feathers. Its flight is slow and noiseless, and performed apparently without much exertion: this exercise is frequently continued until a late hour in the evening, approximating in this respect, as well as in its noiseless flight, to the habits of the owls. The

woods in the vicinity of its hunting ground afford a retreat to this Buzzard during the night, and if undisturbed it will resort nightly to the same tree as long as it remains in the neighbourhood.

In their migrations these birds do not usually associate in flocks like the common buzzard, but travel in pairs or in small companies of four or five, being, most probably, the members of an individual family.

The food of the Rough-legged Buzzard consists of leverets, moles, and other small quadrupeds, especially mice, to which it appears very partial; it also eats reptiles, such as frogs, lizards, &c., and insects. Birds constitute part of its food, and in taking them it appears more enterprising than the common buzzard, attacking, when pressed by hunger, wild ducks and other birds of similar size.

The habit of this bird of sitting with its feathers ruffled gives it an appearance of greater size than it really possesses: the length varies according to the sex, from twenty-one inches to twenty-five.

The Rough-legged Buzzard breeds in high northern climates, in Norway and other countries of similar latitude, both in the old and in the new world. The nest has been described by northern naturalists as greatly resembling that of the common buzzard, and placed in a lofty forest tree. The eggs are three in number, greenish white, with pale brown spots. We have not been able to obtain a sight of the eggs of this species, and are therefore indebted to a foreign work by Dr. Thieneman for a representation of one.

Although rather of uncommon occurrence in England, this bird is very frequently met with on the Continent in a similar latitude. Temminck speaks of it together with the common buzzard as one of the most numerous species frequenting his country; we may therefore infer that its manner of progressing in its migrations is by short journeys from

one clump of trees to another, and that it generally avoids the longer flight that must be incurred in passing from the southern parts of the Continent to England, and thence onward towards its northern breeding stations. Suffolk and Norfolk, and other parts of the eastern coast, being in the direct line of its migrations, are more frequently visited than any other part of England.

Great variations of plumage are observed in this, as in the preceding species, although not quite to the same extent. The most prominent character which distinguishes this species at all periods is the white that always prevails more or less upon the basal half of the tail feathers, and the white breast and dark brown shield upon the lower part of the belly are common to most specimens.

The beak of the Rough-legged Buzzard is small and weak, a good deal hooked, but without a tooth: the colour is black at the tip, and bluish horn at the base; the nostril is oval and placed in a slanting direction; the cere and corners of the mouth are fine yellow. The tarsi are feathered down to the junction of the toes, resembling some species of the owls. The outer and middle toes are united by a membrane; the toes are all reticulated at the base, or junction with the tarsus, with several broad scales towards the claws. The inner and hinder toes have each four scales, the middle toe seven, the outer five. The lore, according to the observations of Mr. Selby, is covered beneath the dark radiating hairs with small feathers, showing an approach to the feathered lore and face of the honey buzzard. The first and second quill feathers are short, the third and fourth the longest in the wing.

The bird represented in the plate is in the colouring most usually seen in this species, and exactly resembles those described by Montagu, Selby, and Temminck, and appears common to both sexes. The entire length of this specimen

was twenty-two inches. The wings, which reach nearly to the end of the tail, measured fifteen inches ; the tarsus three inches ; the middle toe, including the claw, two and a quarter inches, and the hinder toe and claw about two inches. The feet are yellow ; the iris yellow in the greater number of specimens, but, like those of the common buzzard, subject to variation, being in some brown and in others greyish white.

A very dark mottled specimen is sometimes obtained, but does not appear yet to have fallen into the hands of any British naturalist. It is in its general aspect much darker than the one figured ; the whole head, neck, and breast, are black, the feathers bordered with reddish white ; the band above the thighs is white, crossed with black lines ; the thighs and feathered tarsi are rufous, crossed with many narrow black bars, the black occupying rather the greater portion : in these specimens the tail is white, banded near the tip with a broad black bar, above which are four or five narrower bars of the same colour. In some of these specimens the throat and sides of the body are quite black, very narrowly streaked with yellowish white : these are considered to be the oldest birds. In autumn, after moulting, all are darker than in the summer, at which time the plumage has become faded. Temminck describes this variety but does not say to what age he considers it referable. The egg marked 16 belongs to the Rough-legged Buzzard.





RAPTORES.

FALCONIDÆ.

PLATE XVII.

HONEY BUZZARD.

PERNIS APIVORUS. (Cuvier.)

THE Honey Buzzard is of a more slender form than the two preceding species, and the tail is longer in proportion to its size, giving to its whole appearance a much lighter character. This species, which is now classed among the genus *Pernis* of Cuvier, departs still more than the buzzards from the characters attributed to the birds of prey. The beak of the Honey Buzzard is weak and lengthened, the legs are also rather slender, the toes and claws long, and the latter but little hooked; and the description of food sought by it is in conformity with these deviations from the Raptorial characters, consisting chiefly of insects and their larvæ.

The Honey Buzzard is known in most parts of Europe and Asia, with the exception of the colder regions of the North, to which it is believed not to penetrate. It is spoken of as inhabiting Norway and Sweden, Russia and Denmark,—we conclude as a summer visiter,—in which case these and similar latitudes in Asia must be the native regions of the greater number of this species; but on this subject most of the authorities to which we have referred are silent: it is, however, known to breed occasionally in the middle of the European Continent, where it appears in April, and seldom is seen later than September. Some uncertainty seems to prevail

with regard to the summer retreat of the Honey Buzzard ; but as it is known that this species seeks, as food for its young, the bee and the wasp in their immature state, it is natural to suppose that at the season of reproduction it would seek the countries most likely to afford this necessary sustenance. These countries lay in the eastern parts of Europe, such as Turkey, Hungary, and the south of Russia, which are known as the most productive of honey ; also the borders of the Levant. In confirmation of this supposition that these eastern parts are most frequented during summer by this bird, it may be remarked that many are seen during their autumnal migration pursuing their course from the east in a westerly direction. In England it is but rarely seen, and must be ranked among occasional or accidental migrants. It is chiefly confined to the eastern coast of Britain : some few instances are also recorded of its occurrence in the southern counties ; and as it has generally been spoken of in connexion with summer insects, such as dragon-flies, the larvæ of wasps, &c., as constituting its food, it is to be supposed that its appearance in this country is confined to the summer months, and that it passes the winter further to the south. White of Selbourne speaks of having taken an egg of this species from a nest in Selbourne Hanger in the middle of June : September and October are mentioned by Mr. Selby as the period when two specimens occurred in Northumberland and in Berwickshire ; but later than October we do not find any mention of its appearance in this country. According to Temminck, it is very rarely met with in Holland ; it is more abundant in France, especially in the department of Vosges : but he speaks of it in all as a bird of passage.

The Honey Buzzard is observed to frequent the skirts of woods or forests bordering upon open country, usually in the vicinity of water, to which it is attracted by its partiality for aquatic insects and reptiles. It is occasionally seen flying

low, from tree to tree, or skimming over the water in pursuit of its prey ; sometimes it remains quietly seated on a lonely tree on the outskirts of a wood, for hours at a time, with the sharp scale-like feathers of the head erect, forming a sort of crest, and the feathers of the body ruffled and loose.

Besides the food already mentioned, other insects are also sought for by the Honey Buzzard, and either captured on the wing, or pursued upon the ground, on which it has been observed to run swiftly. Caterpillars, worms, moths, beetles, and the remains of frogs, mice, lizards, moles, &c. have been found in their stomachs when dissected.

This bird is very quick in discovering, and expert in obtaining the combs of the wasp and wild bee ; and, probably, is protected from the attacks of these insects by the scale-like feathers with which the lore and head are covered ; the whole plumage, indeed, especially of the upper parts, is remarkably firm and close. The nest of this species has usually been found in the top of a high tree ; and, according to White of Selbourne, is a broad structure of sticks, and lined with leaves. The eggs are three or four, rather smaller than those of the Buzzard ; and, according to the descriptions of Pennant, and White of Selbourne, appear much to resemble the one we have figured. Ours being from a specimen some time preserved, has lost the red tinge which is commonly prevalent in the markings of this and of many other species of hawks, namely, the kestrel, hobby, merlin, and sparrow-hawk, &c., all of which lose that colour after having been some time preserved, if exposed to the light : this may be seen in the eggs of some of the above mentioned species, in the collection at the British Museum, in which the deep red colour has faded to a pale brownish-green. If carefully kept from the light, we have reason to think the colour does not change materially, as we have in our collection some eggs of the smaller hawks, which have for six or seven years preserved their

original tints, dark brick red upon a ground colour of pale greenish-blue.

The young birds, when excluded from the egg, are, according to Willoughby, covered with white down, intermixed with black. Adult as well as young specimens are among those recorded to have been met with in Britain: the one described by Bewick in his incomparable work, appears to have been an adult male, having the ash-coloured head usually observed in mature age. Selby describes one which appears to be a male approaching the plumage of the adult, as it has the head brown, inclining to ash-colour; and Montagu's specimen, which was shot in Berkshire, and since placed in the British Museum, is supposed by Mr. Selby to be a female, or young bird, having the under parts of the plumage brown.

The original of our plate was a young female shot in Suffolk, and kindly sent to us for the furtherance of our work; its entire measurements were as follows:—The wing, from the carpus to the tip, fifteen inches; length of the beak, from the forehead to the tip, one inch one line and a half in diameter.

The eye is placed rather further from the beak than in the genus *Buteo*, the front corner of it being one inch seven lines from the tip of the beak.

The toes are long, and cover a considerable space, measuring, from the hind to the middle claw, three inches eleven lines; the middle toe measures two inches one line, thence to the feathered part of the tarsus eleven lines; the hinder claw nine lines, middle and inner claws the same, the outer claw rather less. In the tarsus this species differs from the buzzards in having the naked part reticulated instead of scaled. In this specimen the chin and the feathers round the base of the beak, and the feathered orbits of the eye, were white; the crown of the head, sides of the face, and ear-coverts also white, each feather strongly tipped with dark brown; the back of the neck and tippet brown, with paler

borders ; the rest of the plumage dark and light brown, varying in different lights, and strongly glossed with a purple bloom. A few of the long tertial feathers had a dark angular patch near the end, and some showed indications of a dark bar above it ; the upper tail-coverts white ; the quill-feathers dusky ; the third and fourth the longest in the wing. The tail, of which the feathers are broad, was very irregularly barred with dark and light brown, as represented in the plate, and tipped with dirty white ; the middle feathers longer than the outer. On the under parts the feathers were all pale yellowish-brown ; every feather when raised or displaced, showing its hidden parts towards the body to be white. The feathers on the lower part of the body were of a looser texture than above.

In the perfect adult plumage of the male, the whole head, including the forehead, nape, and corner of the mouth, are ash-grey ; the throat pure white, the whole under parts the same, tinged on the lower breast and flanks with yellowish buff colour ; the shafts of the feathers are dark, and near the tip of each feather is a well-defined crescent-shaped patch of bright rufous brown. The upper plumage, from the nape of the neck downwards, is deep brown tinged with ash-colour ; the feathers tipped with white, and many of them crossed by dusky marks forming dark bars when the wing is closed. In this plumage the cere is said to be grey, the inside and corners of the mouth, iris, and legs orange. The tail is brown tipped with white, and crossed by three broad dusky bars, the one nearest the tips the broadest ; between which broad bars are several narrower ones.

The tail feathers are white at the root, which is the case with most, if not all the feathers of the body ; and this is in perfect harmony with the description given by Willoughby, of the young birds that he obtained from the nest, which he describes as covered with white down spotted with black ;

the spots were doubtless the tips of the young feathers making their appearance.

The bird described by Mr. Yarrell, which was shot at York, appears to be like the variety mentioned by Temminck in his third volume, which has the head and neck and all the under parts yellowish white, with dark shafts to the feathers.

The young female is above described, and figured in our plate.

The more adult females have the brown and white of the head and neck more distinct ; but retain the dark line that borders the side of the throat ; and in all the under parts the brown colour is confined to crescent-shaped dark spots upon a white ground, the upper parts barred in the same manner as in the adult male.

The egg, No. 17, belongs to this bird.

1



RAI'TORES.

FALCONIDÆ.

PLATE XVIII.

MARSH HARRIER.

CIRCUS RUFUS. (*Brisson.*)

THE Harriers are another division of the Falconidæ, which partaking both of the characters of the buzzards and of the owls, is very properly placed between these two tribes. In their want of courage, in their sluggishness, and manner of taking their food, these birds resemble the buzzards; and they approach the owls in the rough stiffened feathers encircling the neck, and in their habit of continuing the chase for food until late in the evening. They are, however, more active in their movements than the buzzards, and exert more skill and dexterity in obtaining their food, although in these particulars they fall far short of the true falcons. They cannot seize their food on the wing, but usually take it from the ground, or from the water. They chiefly frequent plains, in the vicinity of lakes or marshes, and in such situations only they are found to breed. In colour their eggs differ entirely from those of all the preceding birds of prey, at least such is the case with the species indigenous to this country: and in the places chosen for nidification, they differ from all the other divisions of the Falconidæ. Three species are recognised as inhabiting Britain, and are all indigenous.

The Marsh Harrier appears to be widely dispersed throughout the temperate regions of the globe, being found in all its quarters: but it is not everywhere equally distributed, being

rarely, if ever, seen in hilly or mountainous countries, but abounding in such as are level, and especially where interspersed by marshes and level tracts, on the borders of rivers and lakes. In England these birds are indigenous, and are found at all seasons of the year; but this appears not to be the case much further to the north. As a summer visiter its migration extends as far as Norway and Sweden, and other countries in the same latitude; but it does not remain beyond the fiftieth degree of north latitude later than September or October.

The Marsh Harrier, as its name implies, frequents the swampy margins of rivers and lakes, districts covered by morasses, or interspersed with reeds and sedges. It seldom sits stationary in one spot, like the more sluggish buzzards, but remains on the wing, beating about the bushes or sedges in search of food. Its flight is wavering and uncertain, but slow and performed with little noise. It is seldom seen to alight upon a tree, nor does it roost at night in such a situation, but rests itself upon the ground, or on a hillock, or palings by day, and at night seeks the concealment and shelter afforded by osier beds or reeds by the water side. When flying, this bird may be known by its long and slender wings and wavering flight. Occasionally it rises high in the air, so that only an experienced eye can detect the moving speck.

The usual food of the Marsh Harrier is water birds and their young, or eggs, also small mammalia, reptiles, terrestrial or aquatic, and insects. Montagu says that on the coast of Carmarthenshire, where this bird is common, it feeds upon young rabbits. Temminck observes that in Holland it passes the winter on the downs, and lives upon the bodies of rabbits that have been killed by the stoats, and in the spring supports itself upon the eggs of the wading and web-footed tribes. The destruction that these birds commit

among the young of water-fowl is so well known by the parent birds, that they pursue and attack them with vociferous cries, especially the gulls and pewits, and endeavour to drive them from the spot. Nor are the young of land birds more exempt from the attacks of these general depredators; young quails, partridges, larks, and many others fall a prey to them.

When the reeds begin to grow in the spring, the Marsh Harrier seeks a place for incubation. This is chosen usually on the reedy margin of a large pond, lake, or swamp, and the nest is either placed among the high reeds, or in the stump of an osier bush; it is composed of dry rushes, sticks, and leaves, and is a very shapeless structure. The female deposits from three to five eggs, which are white and entirely spotless. The specimen figured in our plate is, we believe, more pointed than is usual with this species, since they are described by some authors as resembling those of the common domestic hen, but more round in form. While the female is sitting, the male may frequently be seen flying overhead, and expressing his satisfaction by various and elegant evolutions, rising and descending in his flight, and sometimes soaring to a considerable height. The young birds are fed with insects, frogs, and other reptiles. Where the bean-geese breeds these birds are observed to frequent, and great numbers of the young geese fall a sacrifice to their rapacity.

In the Marsh Harrier the beak is of small dimensions, long and narrow, measuring fifteen lines from the forehead to the tip in diameter, and seventeen from the tip to the gape. The upper mandible is armed with a blunt and inconspicuous tooth; the cere long and partly covered with radiating bristles; the nostrils are egg-shaped. The tarsi are slender, and naked for three inches above the foot. The toes are long, the middle one measures two inches eight lines, of which the claw occupies ten and a half lines: the

claws, which are all nearly of equal length, are slender, and but little arched; the middle one is dilated on the inner edge, and sharp; the outer and middle toes united by a membrane. The body is long and slender. The wings are long, measuring from carpus to tip seventeen inches two lines; the first and second quill-feathers are short, the third the longest in the wing. The tail feathers measure ten inches. The lower part of the face is surrounded by a ruff of stiff feathers, and capable of erection at the will of the bird: the rest of the plumage is soft and rather loose: the wings, when closed, reach nearly to the end of the tail. These measurements were taken from a specimen in the Zoological Museum, the same which forms the subject of the plate. According to Montagu, the entire length of one measured by him was twenty-three inches, and weighed twenty-eight and a half ounces: the male is rather less in weight and dimensions.

The bill is dusky, the cere, iris, and legs yellow in the adult birds; in younger subjects the cere and legs are paler yellow, inclining to greenish, the iris dark brown.

This bird, in consequence of the great difference in plumage between the young and old, and the time that elapses before it arrives at maturity; was formerly multiplied into several different species. Its various changes, which chiefly depend upon age, are however now well understood, and to the elucidation of them we are greatly indebted to Montagu and Selby, Temminck, and other continental authors.

The young birds of the first year have the head and throat yellowish white, tinged with rust colour, the rest of the plumage, including the yet unmarked disk, chocolate brown, reflecting tints of violet upon the back: the under surface of the wings and tail are pearly ash grey. In this state of

plumage is the bird so exquisitely figured by Bewick, under the title of Moor Buzzard.

The one mentioned by Latham is supposed to have been still younger, as they are darker, soon after they leave the nest, than at any other period. In these early states of plumage it forms the *Falco aeruginosus* of Linneus, and arundinaceous of Bechstein.

When more advanced in age, about their second summer, these birds begin to acquire some of the variegated colours of maturity: the dark ground colour of the plumage becomes more rufous on the thighs and flanks; the tail paler; and on the ruff, shoulders, and front of the neck, some yellowish white spots appear, and a gloss of ashy grey becomes visible upon some of the larger coverts of the wings.

In the third and fourth year these approaches to maturity become more and more apparent, and, when the full plumage is attained, at the age of four years, the bird presents the tints and distribution of colours represented in the plate.

At this time, the back is rufous brown, the tail pale grey, without any bars, and the under surface of this and of the quill-feathers plain silvery-white.

No. 18 is the egg of the Marsh Harrier.



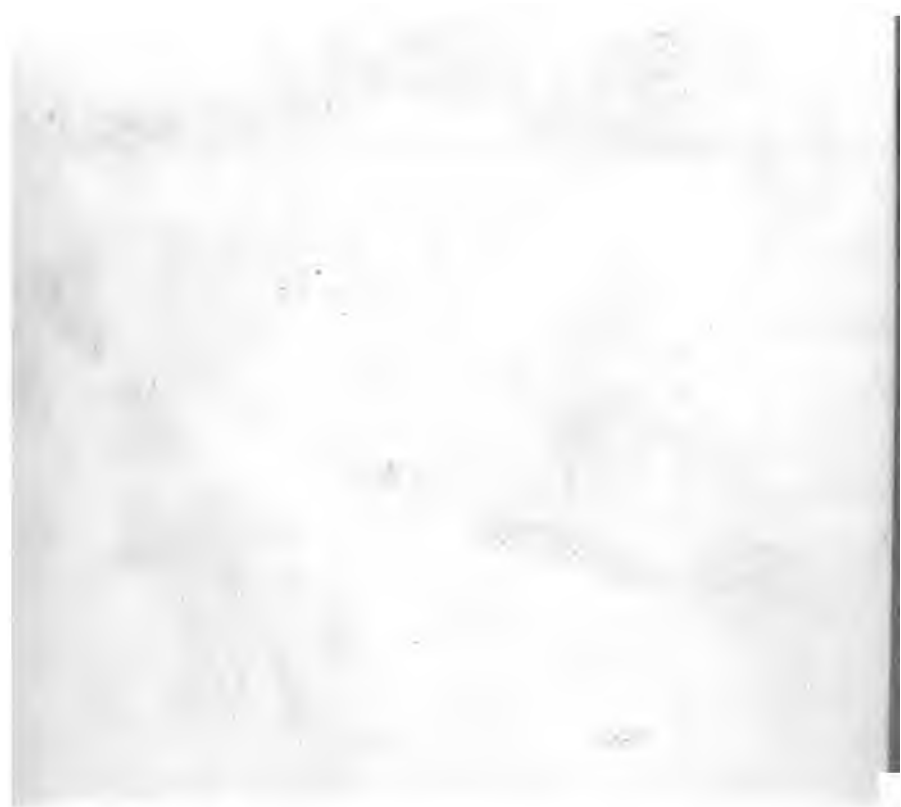
16.



17.



18.





Pl. 19.

RAPTURES.

FALCONIDÆ.

PLATE XIX.

HEN HARRIER.

CIRCUS CYANEUS. (*Flem.*)

To Montagu we are indebted for the elucidation of many difficult and obscure points in this branch of natural history; and as his field of study was nature, the only certain guide, and the deductions he so clearly details are open to the investigation of every one interested in the subject, perfect confidence may be placed in the result of his observations.

Before the publication of his remarks in the *Linnæan Transactions*, the history of our English Harriers was involved in inextricable confusion, and the existence of a third distinct species, now well known as Montagu's Harrier, does not appear to have been even suspected. On the other hand, the Hen Harrier had been by various authors multiplied into several species, inaccurately founded upon the different appearances presented by the male, female, and young. All these difficulties were satisfactorily reconciled by the persevering investigations of this distinguished naturalist, from whose observations we shall freely quote, offering no apology to our readers for so doing, since the information contained in them is the best of its kind. "I undertook," he says, "the care of three young Hen Harriers found in a nest in a furze bush, and only covered with white down. At this time the two largest had thrown out many feathers, sufficient to discover the plumage of the Ringtail approaching; the other, by its

appearance, must have been hatched much later. In about a month, it was evident from the size, that there was but one male, so that all my hopes rested on this single life. As they became full feathered, there was at first no distinction in plumage, but the eyes of the supposed male were always lighter than those of the others, whose irides were so dark as not to be distinguished at a small distance from the pupil. In the dress of the Ringtail, the whole continued through the winter, when the one which had been weakly from the first, died. This circumstance induced me to force a premature change in some of the quill and tail-feathers of the others, fearing some accident might frustrate my earnest desire of bringing the matter to a decisive proof; and about the middle of June, I was highly gratified by discovering an appearance of the new feathers, in the place of those which had been plucked out, that clearly evinced the smaller bird to be a Hen Harrier, and the larger a Ringtail. Thus I had compelled nature to disclose her secrets before the appointed time; for in every other respect their plumage was yet similar, excepting about the sides of the face, which were paler in colour in the former, in which also the irides were of a dull yellow, somewhat mottled; whereas in the latter they still continued dark. The male had, about the 20th of July, thrown out many of the new feathers naturally, especially the greater coverts of the wings, and a few grey feathers on different parts of the body. On the 20th of August, the greater part of the quill and tail-feathers were grown to their full length, and a gradual increase of grey feathers appeared on most other parts. The eyes also became more orange; but it was not till the middle of September that it had attained that state which made it desirable to be retained as an existing fact of the change; it was then killed, and is now in my museum.

“ In this state the plumage of the Ringtail, or female,

still remains about the neck, the smaller coverts of the wings, the thighs, and part of the belly, intermixed with the male plumage; the top of the head and wreath have also a mixture of the feathers of both sexes; the quills, scapulars, and tail are completely masculine; in the last of these are a few small broken bars of cinereous brown, on a white ground, in the three outer feathers, the exterior margins are cinereous grey; the six middle feathers are almost wholly grey, and the markings are very obscure beneath.

“From the account here given of the Hen Harrier, it is quite clear that the change of plumage is effected in the autumn of the year after it leaves the nest, and not in the same year; and as it is between three and four months in the act of moulting, it is certainly very extraordinary that so few instances have occurred of its being killed in that state which might have been decisive. That such has been taken, is evident by the description of *Falco Hudsonius* of authors, which is doubtless this bird in change of plumage.

“The nest of this bird was composed of sticks rudely put together, was nearly flat, and placed on some fallen branches of furze, that supported it just above the ground.”

This Harrier is less attached to marshy places than the two other species; it frequents in preference cultivated land or open heaths, and, as country of that description abounds in England, it is consequently a well known species in most parts; it is found also in Scotland and Ireland. In other parts of Europe it is met with more or less frequently, according to the different nature of the several countries. In Holland it is far less abundant than the Marsh Harrier and Montagu's Harrier. In Switzerland it is scarce, but in many other parts of the Continent it is well known, and extends to the eastern confines of Asia. It is found in many parts of Africa, and is generally believed to inhabit America, both in the northern and southern hemisphere; but the specimens

we have seen from those continents have not perfectly satisfied us of their identity with the British species, as we have observed the flanks and thighs of such American specimens to have a narrow brown streak down the shafts of the feathers, which the Hen Harriers of our own country have not in their adult male plumage.

The Hen Harrier remains in Britain all the year, but in countries a few degrees further north it is migratory; it is said to leave the northern parts of Germany in autumn, and is not seen again until the spring is far advanced.

The habits and manners of the Hen Harrier are so very similar to those of the Marsh Harrier, previously mentioned, that a very minute description is unnecessary. Its food is the same, and taken in the same manner from the ground.

The structure and component parts of the nest are also very similar, and the egg, although smaller in size, is nearly the same in colour, namely, white, a little tinged with green. The locality chosen for the nest is not altogether the same, but differs in proportion to the less aquatic inclination of the bird, and has usually been found among long grass, upon a moor or heath, or on a fallen furze-bush; and we have this summer seen a nest of young birds of this species taken from a similar place on a boggy heath in Surrey.

In flight this species much resembles the Owls, especially the Short-eared (*Otus brachyotus*). The general plumage of the adult male is pale ash-grey on the upper parts, including the head, back, scapulars, coverts of the wings, tail, and some of the larger quill-feathers; also the upper parts of the breast. The first five quill-feathers are dusky, and grey or white towards the root. The under parts of the plumage are pure unspotted white, including the belly, thighs, under tail-coverts, and under surface of the wings; the rump and upper coverts of the tail are also white, and a whitish ruff nearly encircles the neck; on the nape is a patch of black

and white chequered feathers. The beak is black ; the cere pale yellow ; the iris of the eyes, and the legs bright yellow.

The female of the Hen Harrier, commonly called the Ringtail, is altogether different in colour. She has the crown of the head, neck, back, scapulars, and lesser wing-coverts dusky, bordered with rufous brown ; the primary and secondary quill-feathers, tertials, and larger wing-coverts are dusky, and slightly barred above, but beneath the bars are very conspicuous, being on a white, or greyish-white ground. The middle feathers of the tail are dusky ash, with three or four broad dark bars ; the side feathers of the tail are white, tinged with rufous, and barred with dusky or rufous brown ; the upper coverts of the tail white. Breast, sides, under parts, and thighs, are white, broadly streaked down the shafts of the feathers with rufous brown.

The ruff round the neck is very conspicuous, and is composed of feathers mottled with dusky and white : the under coverts of the wings are reddish white, with dark centres to the feathers. Above and below the eye is a white line, and the chin is also white. Iris, cere, and legs, as in the male. The young nearly resemble the female. The chief difference is in the ground colour of the under parts, which is in the young reddish-yellow instead of white.

The following dimensions were taken from a specimen of an adult male bird. The beak, from the forehead to the tip, eleven lines and a half ; from the gape to the tip, one inch one line and a half. Tarsus two inches three lines ; quill-feathers of the tail nine inches ; the wing, from the carpus to the tip, thirteen inches three lines ; the inner and hinder claws eight lines. The tail extends two inches beyond the tips of the closed wings. The male measures in entire length about eighteen inches and a half, and weighs thirteen ounces.

The female, or Ringtail, exceeds the male considerably in

weight and dimensions, being twenty inches in entire length, and eighteen ounces in weight. Her beak measures one inch two lines, and from the gape one inch four lines; the tarsus three inches; the tail-feathers nine inches six lines; the wing, from carpus to tip, fifteen inches; and the inner and hinder claws measure ten lines.

In this species the third and fourth quill-feathers are the longest, and are nearly equal in length, and the first is shorter than the sixth.

The egg No. 19 belongs to the Hen Harrier.





RAPTORÆ.

FALCONIDÆ.

PLATE XX.

MONTAGU'S HARRIER.

Circus Montagui. (Yarrell.)

IN size, general appearance, and habits this species so much resembles the Hen Harrier, the subject of the preceding plate, that the circumstance of the one having so long remained undistinguished from the other is hardly a subject of surprise; and credit is the more due to the acute observation of our before-mentioned countryman, Montagu, for discriminating between them. The differences are, however, when pointed out, sufficiently obvious, and such as will enable an observer acquainted with the subject to decide readily to which species any specimen he meets with should be referred. The differences consist in relative proportions and in weight, as much as in the colours of the plumage; and it may be observed, on referring to the dimensions specified of the males of the two species, that, although Montagu's Harrier is smaller than the Hen Harrier in all other measurements, it equals that species in the length of the tarsus, and exceeds it in the expanse of the wing. The first notice of this bird was published by Montagu in the Linnean Transactions, and was the description of one killed in the summer of 1803. In May, 1808, the same author says, "We observed one of these birds in South Devon, skimming over a patch of furze very near, and noticed that it repeatedly dropped into the same spot, after having pitched on the bare

ground at some distance, but could not observe whether it was preparing a nest or not. At the same time, we noticed a large brown Hawk floating over another piece of furze, at a little distance. This had much the appearance of a Ring-tail, but appeared longer in the wings, which gave a suspicion that these were actually the two sexes of the ash-coloured Falcon, and which seems to be confirmed by subsequent events."

Shortly afterwards, he says, "in the month of July, in the same year, a nest was discovered on the ground amongst furze, containing three young birds and an addled egg, which last was white. Two of the young Hawks continued alive till the summer of the following year, and were evidently, from their disproportionate size, of different sexes. About the beginning of August they began to moult, plainly discovering that they were not Hen Harriers, as before supposed, but actually the birds in question. Unfortunately, at this most interesting conjuncture, the female made her escape, before she had nearly completed her mature plumage, and the only part we could obtain of her was an outer feather of the tail that had been broken off, and was evidently of recent growth, by not being completely expanded at the base. This feather had five bars of ferruginous, with alternate rufous-white on both webs; towards the end the dark bars inclined to dusky. In the latter end of November, the male was, by some accident, killed in the middle of his moulting, when assuming the feathers of maturity, and was in a mutilated state sent to us for examination, the description of which is as follows. The head, neck, part of the scapulars, and most of the lesser coverts of the wings, still possess the nestling brown feathers, which are similar to those of the immatured male Hen Harrier, or the adult Ringtail; but the ferruginous-brown is brighter, and more inclining to dull orange: all the smaller feathers upon the under part of the wings are bright ferruginous, differ-

ing most essentially in colour from that part in the Hen Harrier of either sex, or in any state of change, and which, in the adult male of that species, is invariably white. The under scapulars on one side are similar to those of the adult, elegantly barred ferruginous and white; but on the other side these feathers have not been changed, and are plain ferruginous; the under parts of the body and thighs are nearly matured, being white, and possessing the bright ferruginous streaks down the shafts of the feathers: the quills and the greater coverts are mostly matured, but a few of the nestling feathers remain, which strongly and most interestingly mark the distinction, particularly two or three of the secondaries, which are destitute of the dusky bars, and are of a uniform chocolate-brown, darker than those on the young Hen Harrier: the tail is much mutilated, but the remains of the old feathers are in appearance barred much like those of the adult; the outer feathers with bright ferruginous and white, the others with ferruginous bars at the base; but the third feather is new, on which there are five dark, and five pale bars, alternately," etc. etc.

This Harrier appears to be far less common in England than the preceding: it has been chiefly noticed in Devonshire and other southern counties, but has also been seen in the north of England. Temminck says it is chiefly found on the Continent in the eastern and southern parts; in Hungary, Poland, Silesia, and Austria, and is common in Dalmatia and the Illyrian provinces: it is also found occasionally in Italy and Switzerland. It is very common in Holland in the marshy parts, and in spring frequents the downs on the sea-coast.

The plumage of the adult male, represented in the plate, is ash-grey on all the upper parts, including the entire head and upper half of the breast, the back, scapulars, and wing-coverts, and the middle feathers of the tail: the secondaries

are crossed by three dusky bars, one of which only is visible above, which bars constitute the principal difference in appearance between this species and the Hen Harrier. The primary quill-feathers are black, the outer feathers of the tail are barred ferruginous and white, the under surface of the wings the same. The lower part of the breast, flanks, thighs, and under-coverts of the tail are white, marked down the shafts of the feathers with a stripe of bright ferruginous.

In this species the third quill-feather is the longest in the wing, and the ruff round the head is not so conspicuous as in the Hen Harrier.

The dark bird represented in the plate is a young male, drawn from a specimen in the Zoological Museum, and is in the plumage of the first year. The measurements taken from this specimen are as follows :—the beak from the forehead ten lines, from the gape eleven and a half lines ; the tarsus two inches, three lines ; tail-feathers eight inches, two lines ; the wing, from the carpus to the tip of the quill-feathers, thirteen inches, six lines.

Egg No. 20 belongs to this bird.





Pl. 21.

RAPTORES.

STRIGIDÆ.

PLATE XXI.

EAGLE OWL.

BUBO MAXIMUS. (*Sibbald.*)

THE greater number of species of the Owl genus are of nocturnal habits, lying concealed by day, and seeking their prey during the morning and evening twilight, or by the light of the moon. Among these may be classed the short-tailed species, the pupils of whose eyes are so constructed as to admit a great number of rays of light: these are unable to sustain the full glare of day, but whether retired in thick foliage, or hidden in the gloom of an old ruin, they are sufficiently able to see what is passing around them to escape on the approach of danger. Some species, whose habits are more diurnal, are able to avail themselves of the full sense of sight, even in open day: these pursue their prey on the wing, or lay in wait for it in the shelter of a wood or forest. Such are chiefly those species whose heads are unfurnished with tufts, and whose tail feathers, more or less graduated, extend beyond the tips of the wings.

All the birds comprised in this genus have their feathers soft to the touch, of a downy or silky character. They seize their prey with their claws, and, except when greatly pressed by hunger, refuse all but living food. They moult but once in the year, and the plumage of the young birds differs in most species but little from that of the adult. The beak of the Owl is strongly hooked from the base, with

a very sharp and lengthened tip, but without any tooth or indentation; both mandibles are very moveable: the base and cere are covered with stiff bristling feathers: the nostrils are round and placed on the edge of the cere. The eyes are very large, and surrounded by a disk of stiffened feathers, which are mostly directed forwards, and calculated eminently to protect the large and tender visual orbs from the influence of wind and light: when the eyes are closed, these radiating feathers are often drawn together so as to conceal the eyelids. The ears are very large, and defended by feathers of a peculiar construction. The legs are, in most species, closely feathered, the toes rather short, and the outer one reversible: the claws are long, thin, but slightly arched and very sharp. The head, in most of the species, appears very large, but this appearance of size is deceptive, and caused by the position of the feathers, which chiefly stand up at right angles, the head itself when grasped in the hand appearing to have shrunk away at the touch. A border of rounded, shell-like feathers surrounds the face; this border is sometimes expanded into a circle, sometimes contracted into a triangular form, with one of its corners pointing downwards. The extreme susceptibility of the eyes may be observed in the contraction and dilatation of the pupil with every inspiration of the breath. The wings are of considerable length and breadth, the larger quills very broad, and usually rounded at the tips, with the shafts bent. The tail feathers in most species have the shafts bent backwards, which occasions the tail to hang perpendicularly down when the bird is at rest. The feathers on all the other parts are mostly large, soft, and elastic, and almost invariably projecting loosely from the body.

The greater number of the species of this genus are, as before observed, nocturnal or crepuscular in their habits, going out to feed when other birds of prey retire to rest.

Their broad wings and loose feathering enable them to fly with exceeding lightness and buoyancy, and the serrated edge, which is observable on the outer web of several of the larger quill-feathers, greatly contributes to their noiseless flight, and enables them to steal unheard upon their prey. During the day they are usually asleep, or they sit quietly with half-closed eyes, watching with great attention all that takes place around them: motionless, and with feathers smoothed, they lean sideling against a tree or wall, so that the unaccustomed eye may easily overlook them. They are fond of lonely gloomy places, dark recesses in the forest, or hollow trees in the woods, fissures in rocks, or recesses in old ruins. In such places they sit concealed during the day, but as soon as the gloom of the evening sets in they begin to be on the alert, and steal forth in search of food. At this time they take birds from their nest, or snatch them from their roosting place: animals also that come forth under cover of night in fancied security become their prey; of the murine tribe especially are destroyed innumerable quantities.

The larger species of Owls take hares, rabbits, and other animals, and are very destructive among grouse, and birds of similar size. The larger animals and birds are torn in pieces, the smaller are usually swallowed whole, and the bones, hair, or feathers, ejected in the form of long pellets. In this process they open the beak wide, lower the head, writhe and violently shake the body until the pellet is disgorged.

The breeding-places of Owls are mostly chosen in holes in trees or old buildings, in rocks or caves: their nests are slightly and rudely constructed, and the eggs of all the species are white and rounded in form. Owls exhibit great attachment to their young, and have been known to supply with food for a considerable time such as have been caught and caged.

The Eagle Owl figured in the plate was drawn from a

fine male bird in the Zoological Gardens. While sketching the male, our attention was attracted to his companion, who sat on the ground at the bottom of the cage, shuffling with her feet and wings in the sand. After some time, on shifting her position, we perceived that she had laid an egg. Being anxious to obtain the dimensions and particulars of an egg so undoubtedly genuine, we informed the keepers of the garden of the circumstance, and one of them entered the partition to take it away. To this proceeding the bird made every resistance in her power, flying furiously at the man, with open beak and claws extended, hissing and snapping with her bill, and spreading her wings and tail until every feather was set up like the quills of a porcupine. The egg thus opportunely obtained, measured two inches seven lines in length, and one inch eleven lines in width: it was perfectly white, of a rough chalky appearance, and without any polish.

The Eagle Owl is one of the largest of its tribe, nearly equalling the Eagle in apparent size, and exhibits in its appearance, when roused into action, more of the dignity of the Eagle than the grotesqueness usually characteristic of the Owl. To this dignity of appearance, we conclude, may be attributed the name of Grand Duc, bestowed upon it by Buffon, Temminck and other authors. What Grand Duke has had the honour of being its prototype we are not informed. This species is chiefly an inhabitant of mountainous countries: it is common in Norway, Lapland, and Russia, is found in Germany and the mountains of Switzerland, but is rare in France, and more so in England. According to Temminck it inhabits Italy, and is even met with in Rome: it is found also in the middle and north of Asia, in Africa, and in North and South America. It is never seen in countries that are open and level; but the more

rocky and unfrequented the country, the more it is preferred, especially where old ruins exist, which are its chosen places of resort. On this account the south of Germany is much visited by the Eagle Owl, and in the Hartz Mountains it is everywhere well known.

In these wild regions this Owl was formerly the subject of many a curious and popular superstition, and even at the present time plays no inconsiderable part in the history of the Wild Huntsman and other evil genii. Its singular and savage appearance, associated with its melancholy voice, render it an inappropriate auxiliary in the supernatural tales in which Germany so much delights. The modulation of the higher and lower notes of several of these birds, heard among ivy-covered ruins, or in dark forests; where echoes repeat the hollow unearthly tone, may well be likened to the barking of dogs, the neighing of horses, or the unhallowed laughter of the phantom-huntsman,—stories which even now thrill through the nerves, and chill with superstitious horror the uneducated clowns, the chief inhabitants of the gloomy and lonely mountain-forests of the Hartz.

In former times, when fire-arms were not so much in use, these birds frequented the towers of isolated castles, although inhabited. About the latter end of March, these birds begin their arrangements for breeding, although they only produce one brood in the year. Their large unshapely nest is constructed of many dried sticks and branches, and lined with dead leaves or straws, and is either placed among the rocks, in old buildings, or stumps of trees, and occasionally in a lofty tree.

Sometimes the eggs are deposited in a hole, without any attempt at a nest. The female deposits two or three, rarely four eggs, and sits three weeks; seldom more than two young ones are hatched. These much resemble a ball of

wool, being covered with dirty white loose down, sprinkled with brown; and it is not before the sixth week that the quills show themselves through the down; consequently the young birds remain a long time in the nest: they utter a continual hissing and piping noise, by which they frequently betray their retreat. The parent birds supply them with food in great plenty, and never wander far from their place of concealment. The old birds usually return every spring to the same place for incubation, and even if continually robbed of their eggs or young, they will not desert a favourite spot.

The Eagle Owl lives generally alone, except during the season of pairing, when he remains with his family. His flight is performed with ease and lightness, is slow, wavering, and generally near the ground. In habits he is nocturnal, but when disturbed from his place of retreat, even in bright sunshine, he is able to see sufficiently to avoid flying against branches or other objects which surround him. In confinement he is far more alert by day than many others of his tribe, and frequently feeds during daylight. His usual cry is *poo-hoo*, accompanied, when molested, with hissing and snapping of the beak. During the breeding season the female utters a screeching noise, together with the accustomed hoot. When at rest the appearance of this bird is clumsy and shapeless, but when its attention is attracted on the approach of any one, it opens to the full width its large and brilliant eyes, throws its head from side to side, snaps its bill, and shaking its plumage and expanding its formidable claws until its passions are fully roused, finally darts with fury upon the object of its anger. Its strength being equal to its courage, it does not easily relinquish what it has once seized.

The Eagle Owl feeds upon all sorts of animals and reptiles: among the larger animals it sometimes takes a

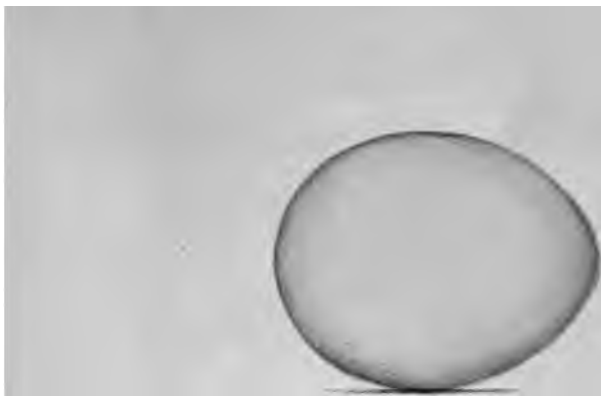
young deer, or a lamb ; also hares and rabbits, rats, moles, mice, etc. Among ground birds the largest are not too powerful for it ; cocks of the wood, and other grouse, pheasants, partridges, crows, rooks, etc. become its prey ; snakes, lizards, and frogs, and even insects are not overlooked. The entire length of the Eagle Owl is twenty-four or twenty-five inches ; the expanse from wing to wing sixty-eight to seventy inches.

The tail is square, and the feathers measure ten inches in length ; the wings, when closed, cover about three-fourths of its length. The beak is strong, bent into nearly a semi-circle, measures two inches from the forehead to the tip in diameter, and two inches and three-quarters in the arc ; the colour is dusky-horn.

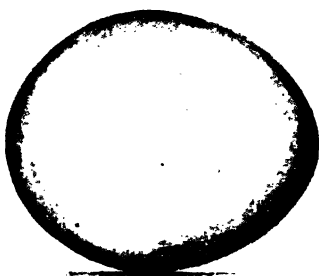
In the fine large eyes may plainly be seen the contraction and expansion of the pupil with every effect of light : the orifice or pupil is not so large in proportion as in some other Owls ; the iris is a fine rich orange. The tarsi are three inches long, the middle toe two inches and a half, the claw one inch and a half ; the hinder toe one inch, and its claw two inches and a half. The tarsi and upper parts of the toes are covered with close feathering, the soles of the feet are rough and warty, and of a sooty colour. The feathering consists of a mixture of yellow, brown, rufous, dusky and black, disposed in markings almost impossible to describe. The strong bristling feathers round the eyes are pale ash, intermixed with brown, yellow, and black ; the tufts over the eyes are composed of black feathers, edged and marked with yellowish-brown, the longest measure three and a half inches. The entire upper plumage is dark brown and rufous yellow : the under plumage is in the ground colour ochre and rufous yellow, the feathers crossed with dark waving lines, and marked down the centre of each with a stripe of dusky, broadest

upon the upper part of the breast ; the throat is white. The female is generally darker in colour than the male, and larger in size. The young birds, when they have acquired their full feathering, much resemble the adult.

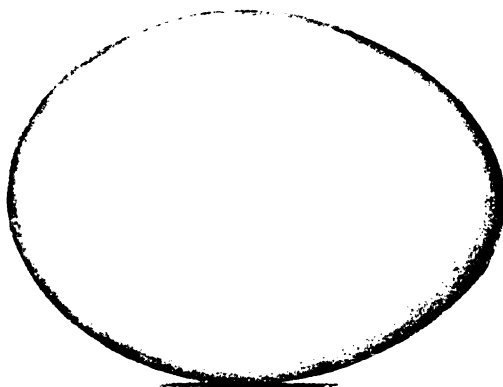
The egg of this species is marked 21 in the plate.



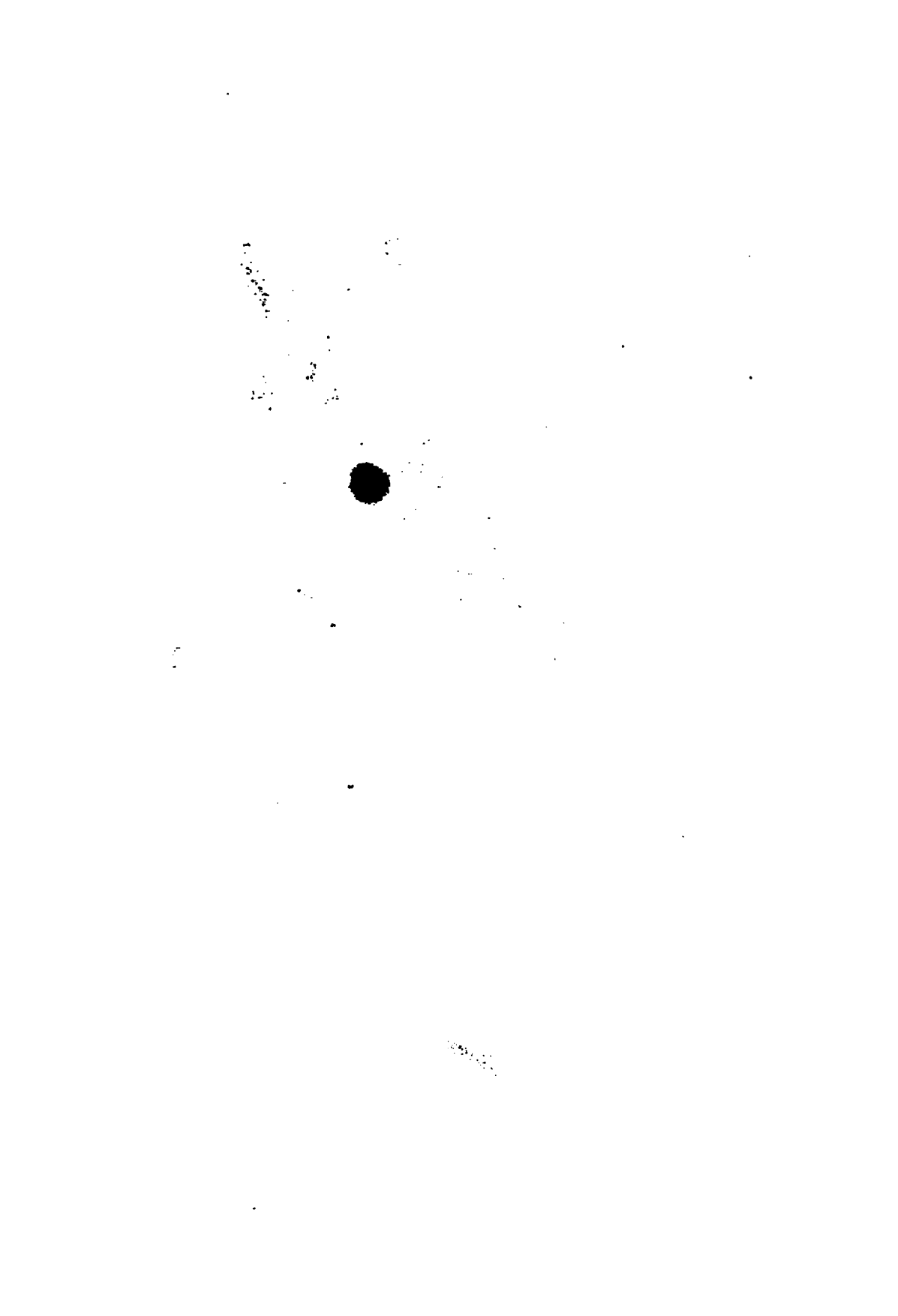
19.



20.



21.





N. 22.

PLATE XXII.

LONG-EARED OWL.

OTUS VULGARIS. (*Flem.*)

THIS very handsome species is indigenous in England, and remains here all the year, but is far less common than several of the British Owls. Its places of residence, and habits of concealing itself, may contribute to render it less generally known. In confinement it is readily tamed, and will become very sociable, and makes itself extremely amusing by the ridiculous and indescribable attitudes it assumes, which are rendered picturesque by its long and beautiful ears. It frequently sits apparently asleep, with its eyes closed, except the narrowest slit, through which it perceives and notices all that surrounds it. When undisturbed, these birds remain very quiet by day, and sit motionless on a branch as long as daylight lasts; if carefully approached, they will not take wing, but endeavour to effect concealment by shrinking closer into their places of retreat. Thus hidden in dark woods, in summer, among the thick foliage, forest-trees, or close copse-wood, and in winter in ivy, fir-trees, or evergreen shrubs, this species is so effectually sheltered from inexperienced observers as to be seldom seen. Its mottled and downy plumage harmonizing with the rugged bark of the stem against which it rests, or assimi-

lating with the dead, or withering leaves of autumn, also contributes to ensure its safety.

In open unsheltered country this species is seldom, if ever, met with. Dark woods, and thick plantations overgrown with underwood, are, however, the only shelter sought by this Owl, which is never known to inhabit ruins, rocks, or hollow trees, like some others of its tribe. It is found in most parts of the world, in countries well covered with wood ; but, although it remains in England during the winter, it is considered to be migratory on the Continent of Europe.

Nest-building is not much studied by any of the members of this family ; and as the Long-eared Owl never avails itself of the remains of human architecture in the shape of old ruins, like most other species, it is compelled to seek the accommodation afforded by the deserted habitation of some other bird, and frequently chooses that of the pigeon, if sufficiently sheltered, of the magpie, or the squirrel. The eggs deposited are four or five in number, white and round.

The young birds are at first covered with white down. This soon becomes yellowish, intermixed with brown ; by degrees the dusky face appears, and the tufts begin to rise, in the form of two elevations, streaked with brown.

The call-note of this species, which is occasionally heard in the evening, or during the night in the spring, is described to be a long-drawn note, resembling the word *hook*, the latter part of the word being pronounced half a note higher than the beginning ; sometimes a hollow booming noise is uttered by them.

The note of the young birds is similar to that of the parents, but uttered in a higher key.

In entire length this bird measures fourteen or fifteen

inches ; in expanse from wing to wing, three feet two inches ; the length of the tail is five inches and a half, and the closed wings reach beyond the tip.

The ear in this species is particularly large ; the lids, or flaps, when expanded, are nearly as long as the head. The tufts, or horns, upon the head are also very large and conspicuous ; they consist of several feathers, capable of erection ; the frontal ones are the longest, and measure from one and a half to two inches ; the hinder feathers are the shortest. The beak is much arched, and measures one inch and a quarter in the arc ; it is black, as are also the cere and eyelids. The iris is bright orange, or fire-colour. The tarsus measures one inch and three-quarters in length, the middle toe one inch, and the claw five eighths of an inch ; the hinder toe half an inch, the claw the same. The legs and feet are covered with close, short, soft feathers, except the soles, which are bare, and of a dirty yellow colour. The claws are thin and sharp, of the appearance of horn. The colours of the upper plumage are dusky, ash-grey, rufous, and white, beautifully blended and softened together. The quill-feathers are salmon-colour, passing into reddish grey at the tips, and crossed by narrow dusky bars. The upper part of the breast is rufous brown, passing into white on the flanks and under tail-coverts. The bristling feathers between the eyes and beak are black at the root and white at the tip ; the rest of the face ferruginous. The feathers of the tufts are black, bordered with white and rufous brown.

The food of this species is rats, mice, moles, and beetles, occasionally birds ; but, as this Owl is of nocturnal habits, its food must necessarily consist chiefly of creatures that are most readily met with at night. As soon as twilight sets in, they come out of their hiding-places, and fly about in

every direction in search of food ; through woods and fields, sometimes around gardens and orchards, continues this rambling of the night, which ceases only with the approach of day. In winter, in severe weather, when their usual food is scarce, individuals of this species have been seen boldly pursuing the chase for food in open day.



Pl. 23.

RAPTORES.

STRIGIDÆ.

PLATE XXIII.

HAWK OWL.

OTUS BRACHYOTUS (*Fleming.*)

THIS species, called by some authors Hawk Owl, from its small head, lively appearance, and habit of flying frequently by day, is perhaps better known under the designation of Short-eared Owl. It resembles much in general aspect the Long-eared Owl of the preceding plate, but differs very essentially from that species in habits, locality, &c.

THIS bird is found here at all seasons, but its numbers are believed to be considerably increased in autumn and winter by visitors that retire to this country from more northern latitudes. Unlike the last described species, this bird does not seek the shelter of woods or copses, but prefers open country, fields, and moors, in which it searches for food often by day in gloomy weather. Its place of nidification is chosen on the ground, among heath, long grass, or rushes: in such places the young birds have been found seated on the ground, having left the nest before they were able to fly. They also breed upon downs near the sea-coast; the young have been frequently seen on our eastern coast in such situations, and they are said to breed in great numbers on the coast of Holland.

It is remarked by M. Boié that this species follows the migrations of the Lemmings, wherever these destructive animals establish themselves. In the countries of the North the

Hawk Owl is found in considerable numbers : in all these countries it is a bird of passage.

The Hawk Owl is nearly as widely dispersed as the long-eared species. In Europe it is everywhere known, and also in North and South America, and in Asia. In the north of Europe these birds are common in low, marshy places, and consequently abound in the low parts of the north of Germany and in Holland. In these countries damp fields, meadows, and swamps are much frequented by them. During the day they sit on the ground, among willow bushes, thistles, nettles, or other tall plants, or among reeds and high grass. In autumn they have been found in the furrows of ploughed lands, or concealed in potato-fields, or among cabbages. They seldom perch in a tree, or even bush. Their call is an agreeable sounding note, resembling *kiou, kiou*, seldom uttered, but soft and pleasing. The food of this species is chiefly mice and insects, small birds, &c.

The tufts upon the head are not very conspicuous, and are chiefly erected, according to Montagu, when the bird is in a quiescent state, or asleep ; on being disturbed or roused, it raises the other feathers of the head, so as nearly to conceal the aurated tufts. These tufts consist of only three or four feathers, the longest of which measures less than an inch : they are placed much nearer together than those of other horned owls. The entire length of the Hawk Owl is fourteen or fifteen inches, and in expanse from wing to wing it measures forty-four to forty-six inches ; the tail-feathers are six inches long, and the wings, when closed, reach considerably beyond their tips. In weight it is about eleven ounces. The beak and cere are black, and the former measures an inch and a quarter in the arc. The tarsus measures two inches.

The feathers of the upper plumage are chiefly dusky,

bordered with light ferruginous; the quill-feathers are yellowish salmon colour, and becoming greyish near the tips; marked with dark narrow bars: the second feather of the wing is the longest, and several of them are strongly serrated on the outer edge. The tail-feathers are marked with dusky bars upon a ground of pale ochre; the legs are feathered down to the claws with downy feathers of a light buff colour. The eyes, which are yellow, are encircled with radiating feathers of a deep black passing into white: the wreath which borders the face is composed of feathers striped with orange and black; near the orifice of the ears the black predominates: the feathers of the tufts are dusky on the outer webs and yellowish white on the inner. The under plumage is rufous, each feather marked down the shaft with a dusky stripe.



Pl. 24.

RAPTORES.

STRIGIDÆ.

PLATE XXIV.

SCOPS-EARED OWL.

SCOPS ALBROVANDI. (*Ray.*)

THE Scops-eared Owl is known all over Europe, with the exception of the most northern parts; and in many parts of America, Asia, and Africa, where the climate is temperate or warm. In France and Italy they are very abundant and well-known, and frequently inhabit gardens and plantations in the vicinity of villages and towns. In such places they sit sheltered in a hole in a tree, or among the thick leafing, asleep the whole day, and come out in the evening to feed. In the south of Germany, and in the mountain forests of Austria and Switzerland they are known to breed, and the place chosen is usually a hole in a tree, or in a rock: the young birds are fed with beetles and other insects: when taken from the nest they are easily tamed, and will eat meat, either raw or dressed, potatoes, &c.

In a wild state their food consists of small birds, frogs, or mice, which they tear in pieces; and of insects, such as grasshoppers, cockchafers, moths, &c. Their flight is soft and wavering, but tolerably quick.

This beautiful little Owl is very rare in England, and very few instances of its appearance here have been recorded; it is only known as a summer visiter, and is supposed to leave even the warmer countries of Italy and France as winter approaches, and retire still further south.

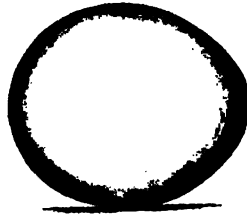
This is one of the smallest of the Owls found in this country, measuring only about eight inches in length, and in expanse twenty and a half inches; the tail measures nearly five inches, and the wings reach a little beyond it when closed. The beak is strong, and measures three-fourths of an inch, and is dusky with a black tip. The iris is fine yellow, paler in the young than in the adult.

The legs are small and delicate, and closely feathered: the toes are unfeathered, and covered with scales; the tarsus measures one inch two lines, the middle toe and claw one inch one line, the hinder toe and claw three-fourths of an inch.

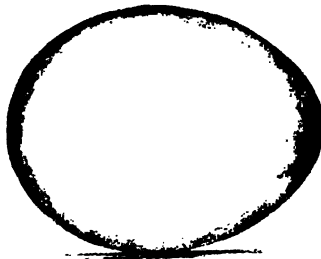
The tufts on the head of this little Owl are short and indistinct, and sometimes laid down upon the head; in dead specimens they are hardly distinguishable.

The whole of the upper plumage is composed of dusky rufous brown and grey, the brown predominates on the upper parts; the ground colours of the under plumage are ochre yellow and grey, with square dusky spots in the centre of some of the feathers, and largest on the breast; these are crossed by narrow waving lines; the quills are transversely barred with yellowish white and brown.

The egg numbered 24 belongs to this species; they are usually three or four in number.



24.



23.



22.



RAPTORES.

STRIGIDÆ.

PLATE XXV.

YELLOW OWL.

STRIX FLAMMEA (Linn.)

THIS well-known species is the most beautiful of all the European Owls. Its face, which is surrounded by a most perfect frame of peculiarly-shaped feathers, is in the form of a heart, which, however, retains that form only as long as the bird is alive, as it becomes completely circular when the bird is dead. Its feathering is particularly soft, and most beautifully pencilled towards the tips of the feathers on the upper parts, with black on a white ground. The legs and toes are of a peculiar appearance, the wings are long, and the tail short and narrow; the first quill feather is much serrated, the third and fourth quills are the longest. The outer part of the ear is particularly large, and the frontal ear muscle forms a perfect covering or flap.

The Yellow Owl measures from fourteen and a half to fifteen inches in length, and thirty-nine inches in expanse; the tail is five inches long, and the wings extend an inch and a half beyond it when closed. The beak is somewhat lengthened and beautifully hooked towards the tip, measuring one inch and an eighth in length, and is white horn colour approaching to flesh red; the nostrils oval. The eyes are placed very deep, and are not so enormously large as in some owls, the iris is dark brown, and the pupil bluish black. The legs are thin, closely covered to the ankle with most

silky feathers, becoming naked towards the feet, where the flesh red shows through the dirty hairs that sprinkle them; the appearance resembles most of all the odious legs of a hairy spider. The dusky claws are thin and much pointed, the middle claw has a comb-like ridge on the inner side. The tarsus measures two inches and a half, the middle toe and claw one inch and a quarter in length, the hinder one inch.

The ground colour of the upper plumage of this owl is sienna yellow, the tips of the feathers beautifully pencilled with dark purple. The feathers of the disk or face are white, the eyes are surrounded by a rust-coloured halo which extends downwards to the beak. The small stiff feathers which form the frame are rufous and dark brown. The throat and all the under parts are white tinged with ochreous yellow, sparingly spotted with dark brown drop-shaped spots near the tips of the feathers. The top of the head, nape, shoulders, and the whole back are blushed over as it were with pale ash grey, which appearance is caused by the tips of the yellow feathers being pencilled with that colour. The shoulder-feathers and wing-coverts are beautifully ornamented with one or more pearl-like white spots, bordered with black, and appearing like beads strung together. The larger quills are buff yellow on the outer webs, paler on the inner, and terminating in broad white edges; these are barred with black and white freckled spaces. The tail is yellow, tipped with white, and spotted and barred with black. The soft feathering on the legs is faint rust-colour or white; the under wing-coverts pale rufous yellow, spotted with dark brown; the quills on the inner surface are yellowish white; towards the extremity the dark bars show faintly through.

The male and female are in outward appearance very much alike, the latter is more plump and darker coloured. Young birds are paler in colour, the lower parts being less tinged with yellow. Some varieties of this bird have been recorded, the most remarkable are one which was pied yellow and

white; and another of which the ground colour was perfectly white, and the pencillings on the upper plumage very indistinctly defined in the palest possible colouring.

The Yellow Owl is known in all the temperate regions of the globe; it hardly extends northward in Europe so far as the southern parts of Sweden, but is well known in the south of Asia, Africa, and America, and very numerous in Tartary. In consequence of its residing generally near the habitations of man, it is every where a bird of familiar appearance; it does not frequent mountains or forests, but inhabits the vicinity of villages and farms, and is even met with in large towns, where it hides in towers, church steeples, holes in walls, crevices, &c.: barns and pigeon houses are much frequented by them; old ruins it is most fond of, where it sits all day in a sleeping attitude. Sometimes it also hides in a hole in a tree, or in the shelter afforded by an evergreen.

In very cold weather a number have sometimes been found sitting close together for the purpose of keeping each other warm; and it appears as if the male and female constantly associate together throughout the year.

The appearance of this owl, in consequence of its three-cornered or heart-shaped face, is very singular, and bears much resemblance to a monkey. When asleep the face is much lengthened, and the dark brown spots descending from the eyes give it a very ludicrous expression. During the day the eyes are only opened in the form of a narrow slit; at night they are wide open and peering about; the face is then also more rounded. In confinement this bird is very easily tamed when taken young, or brought up from the nest.

The flight of these birds is soft and without the least noise, slow, wavering, and often near the ground. As soon as it begins to be dark they commence their search for food, and carry on the chase, if moon-light, until the morning; during this time they frequent fields and meadows and copse-wood in search of mice, rats, moles, small birds, and coleopterous insects. These birds are said to collect and hoard up

food and carry it to their place of resort, as if in store against dark nights or unfavourable weather.

Many of this species live in a state of half domestication in barns, stables, malting-houses, &c. where they receive careful protection from the owners in return for their invaluable services in destroying mice and other vermin.

The following fact, which came under our own observation some years ago, shows the little fear that these birds entertain for men. One of these species which inhabited some fir trees in a cottage garden, became so tame that it would enter the door or window of the cottage as soon as the family sat down to supper and partake of the meal, either sitting upon the back of a chair or venturing on the table; and it was sometimes seen for hours before the time watching anxiously for the entrance of the expected feast. This exhibition was seen regularly every night, until some unfortunate sportsman put an end to its life.

The Yellow Owl is in its actions one of the most grotesque of its tribe. When a newly-caught one is put into a cage, it sits quite upright in a corner, crowding itself against the wall or wirework, with its long, thin, white, harlequin legs pressed together; sometimes, as in a paroxism of fear, it will fall flat down upon its side and remain as if dead, then slowly raising its head it peers stupidly about, or starting up flies at the object of its fear, with its feet thrust forward and its sharp claws extended. All its actions appear rather those of a puppet governed by the hand of an unseen operator, than the result of its own volition. One individual that we had for a considerable time used every morning, on our entering the room where it was kept, to perform an extraordinary evolution, as if intended for a polite and respectable salutation; this commenced by slowly spreading its ample and beautiful wings, then lowering its puffy head, and at the same time throwing it forward, it complacently moved it from side to side for some minutes.

When taken full grown, they are sometimes very stubborn

and refuse all food, pass the day moping in a corner, and the night in vaulting about the place of confinement in ineffectual attempts to escape; these stratagems have, however, the desired effect, the unfortunate captive excites pity, and is eventually set at liberty. The living subject from which the plate was taken was the polite bird above mentioned.

The young of owls are proverbially hideous creatures, and we think (parent though we be) that the eagle, in the delicious fable of Lafontaine,* deserves to be freely pardoned for not recognizing as the children of his friend, which had been described to him as

“ Mignons

Beaux, bienfaits, et jolis, sur tous leurs compagnons.”

which he afterwards met with, and with such exquisite deliberation proceeded to demolish for his evening meal. We may conclude they belong to the species under present consideration, for various reasons, especially the locality assigned them by the fabulist (and there is much truth in fables) who thus proceeds to the fatal catastrophe :—

————— “ Un beau soir qu’il étoit en pâture,
Notre aigle aperçut, d’aventure,
Dans les coins d’une roche dure,
Ou dans les trous d’une mesure,
(Je ne sais pas lequel des deux)
De petits monstres fort hideux,
Rechignés, un air triste, une voix de Mégère
Ces enfants ne sont pas, dit l’aigle, à notre ami ;
Croquons-les.”

But we must intreat the forgiveness of our readers for thus interrupting the truth of our history by such fabulous digressions.

The egg No. 25 in the plate belongs to the Yellow Owl.

* L’aigle et le Hibou.

PLATE XXVI.

TAWNY OWL.

ULULA STRIDULA.

THE Tawny Owl is about sixteen or seventeen inches in length, and from thirty-nine to forty inches in expanse ; its tail measures between seven and eight inches in length, and the wings when closed reach nearly to the end of it. The feathering of this bird is very loose and puffy ; the head and neck are thick, almost equal in size to the body ; its face is large and nearly round ; the eyes are particularly large ; the exterior opening of the ears is of moderate dimensions, oval in form, and barely half as high as the cranium. The first quill-feathers are serrated on their outer edges, and the fourth and fifth are the longest in the wing.

The beak of the Tawny Owl is proportionately large, much hooked, measuring from an inch and a half to an inch and five-eighths in the arc from the forehead to the tip, and not toothed ; it is pale horn colour : the cere which covers the rounded nostrils is greenish. Its eyes are very dark brown, the pupil blue black, having an opaque appearance ; the eye-lids are dingy flesh-coloured ; in the young, reddish grey.

The legs are rather short, and almost entirely covered with woolly feathers ; the soles of the feet are naked, and rough or warty in substance, and dirty yellow in colour ; the claws are tolerably large, pointed, but not much bent, horn coloured, with black tips. The tarsus measures two inches in length,



Pl. 26.

the middle toe including the claw not quite two inches, the hinder toe and claw a little more than one inch.

In the adult male the bristling feathers of the face are greyish white, intermixed with black near the beak, and sparingly dashed with grey, particularly about the ears. The frame which surrounds the face consists of small rounded feathers, which are black in the centre, edged, spotted, and barred with white and rufous; about the ears and below the beak the brown prevails, as does the grey about the eyes. The forehead and top of the head are dark brown tinged with rufous; the neck and back feathers are dark brown in the centre bordered with brownish grey, and spotted with dusky and tinged with rufous. The wing-coverts are almost like the back, with more spots of dark brown, in the shape of waving lines: the large are sparingly spotted with white; the shoulder feathers are grey, spotted, streaked, and speckled with dusky, the outer sides marked with pear-shaped irregular white spots bordered with black; and when the feathers are a little displaced, these markings form so many interrupted lines. The quills are barred with dusky on a ground of rusty yellow; the secondary quill feathers are marked in the same manner, but the bars are narrower and more confused; the tail feathers are a pale grey, speckled and dusked with dark brown, the tips white; these feathers are also barred, but the bars are frequently only perceptible on the inner webs. The under wing-coverts are white barred with pale brown; the underparts of the tail and quill feathers the same but paler. The feathers of the neck and breast are dirty white, marked with rust-coloured brown in the middle, with a dusky streak down the shafts, which terminates in zig-zag lines or spots. On the lower part of the breast these dusky markings form frequently indistinct crosses; the belly and under tail coverts are white, with brown shaft streaks; the covering of the legs yellowish white, speckled with brown.

The principal distinction in the colouring of these owls consists in the ground colour, as the markings are nearly all

alike ; they may vary in different specimens from being more numerous to less so, paler or more distinct, but they retain the same character and expression. The young females of the Tawny Owl have a peculiar appearance, in consequence of the tinge of rufous with which they seem to be dyed. Their face partakes of the same colouring, except about the region of the beak, which is beset with mixed black and white bristling feathers. This rufous colour extends over all the upper parts, and the dusky markings are more distinct. On the lower part of the breast the shaft streaks are more simplified, and only now and then branch out on the sides into cross bars. There are hardly any bars to be seen on the tail, and those of the wings are narrower than in adult birds.

By comparing a number of specimens it may be seen that the fox-coloured birds are young females ; the reddish brown, young males ; the reddish grey, old females ; and the pale grey, adult males.

The Tawny Owl is plentiful all over Europe, the north of Asia, and probably in North America ; wherever there are trees and forests : whether the country is flat or hilly is indifferent. During the summer months these birds remain in the thickest parts of the woods ; in autumn and spring they frequent copse and young plantations ; and in the winter large orchards about villages.

While the leaves remain on the trees they perch on the branches among the thickest foliage during the day-time, which they pass usually in sleep ; during the winter season they hide themselves in holes of trees or rocks, or in old buildings.

It is difficult to imagine how the owl can have become associated with the idea of wisdom, and dedicated to the goddess of that attribute, unless in mockery, or to show how short a step there is between the sublime and the ridiculous.

The feathering of this Owl stands generally at right angles from the body ; its thick head seems to be only stuck on the shoulders, as it turns it from side to side with so much

solitarily, and sometimes sits with the beak resting on the back, its large eyes winking slowly. When this bird takes flight it flies slowly and heavily, beating the air easily with its blunt and arched wings; in the dark, or at moonlight it is a little quicker in its movements. This Owl hoots, and has frightened the superstitious of many nations with its call.

The Tawny Owl feeds chiefly on mice of all descriptions, and also on moles, frogs, beetles, and other large insects; young hares and rabbits are occasionally taken by it; small birds which it can surprise at rest it eagerly consumes; all these it seeks by twilight or during moonlight nights, for which purpose its entirely noiseless flight is of great service.

Early in the spring these birds begin their pairing call (which sounds like a satirical laugh) and commence their preparations for breeding, for which purpose they choose a hole in a tree, in which they collect moss and feathers; but these materials are scarcely sufficiently arranged to bear the designation of a nest. The female deposits from three to five eggs, and the young are hatched in about three weeks; they are blind for some days, and their red eyelids have the appearance of being inflamed, particularly in contrast with the grey coloured down with which they are clothed. The appearance of these birds while nestlings, and before the growth of the feathers, is very extraordinary; the whole bird is covered with pale grey woolly down, and resembles nothing so much as a pair of Shetland worsted stockings, rolled up, such as might have belonged to Tam O'Shanter; and, except when the bright round eyes are opened, it is impossible to suppose the object to belong to the animate creation.

This Owl soon becomes tame in confinement; one which we reared from the nest quite domesticated itself in the family. It inhabited an out-building in which various household affairs were transacted by the servants, to one of whom it was evidently attached; and as the building was much covered with ivy, which obscured the light, it would sit in the day-

time and watch her operations with all the familiarity of a favourite cat; no restraint was put upon its liberty, yet it seldom strayed beyond the residence to which it had attached itself.

This bird amused us frequently by an exhibition which at last cost the poor creature its life. It was fond of washing itself in a tub of water which usually stood in the place where the bird was kept; and the dreadful sight baffles all description, when this wretch sat on the edge of the tub dripping wet, with its feathers all sticking close to its sides: the only thing imaginable that we can compare the object to, for to call it a creature in that state would be mockery, is the black remains of a burnt paper candle-lighter, surmounted by two glaring eyes. This pastime ended tragically; the poor owl having once by mistake plunged into a tub of food prepared for the pigs; and ended his career in consequence of the vessel being deeper than his usual bath.

The superstitious belief that owls are harbingers of death is too prevalent among the uneducated, and too generally known to need more than a passing observation; but I cannot forbear to relate a circumstance respecting this subject which occurred under my own observation. My father's gardener had an ailing wife; and one Sunday morning my father, on passing near the cottage where the family resided, was much concerned to see the man and his two sons in deep mourning, and concluding that the invalid wife was dead, felt rather shocked and pained that he should not have been sooner made acquainted with the loss sustained by the afflicted family, and consequently approached in haste to offer his condolence. He was presently undeceived by the husband, who assured him that his wife was as well as usual, but that he nevertheless anticipated her approaching death, which would undoubtedly take place within a few days (I believe nine was the period fixed) as a brown owl had passed over their cottage, and had since been heard nightly to hoot in the very close in which the cottage stood. He explained,

that as the family had been under the necessity of purchasing each a new suit of clothes to make a respectable Sunday appearance, they thought it most advisable to provide themselves at once with mourning, in order to avoid the double expense of purchasing again.

Whether from the baneful influence of the poor owl, or from the impression made upon the woman's own mind by the ominous circumstance, and by being so unanimously consigned to her grave while yet alive, I will not decide, but within a very short time after this circumstance she really did terminate her mortal career.

The egg No. 26 belongs to this species.

PLATE XXVII.

SNOWY OWL.

STRIX NYCTEA. (*Linn.*)

THIS Owl is particularly distinguished from all its congeners by its small head and face, in proportion to the size of the body. The fact of its being a diurnal feeder may be discerned in its slender make, and greater agility, and it differs in some other respects from the night-flying owls; its feathering is firmer, the wings are narrower and more pointed, and there is no serrated border on the edge of the quill-feathers: of the usual disk of the face hardly any trace is to be found.

This large and handsome bird, which is the next in point of size after the Eagle-Owl, belongs to the more northern regions of Europe, Asia, and America; is well known and plentiful in Greenland, in Hudson's Bay, and in the islands of the Arctic Sea. Although the Snowy Owl is able to bear the severest cold, it migrates towards the south during the winter season. In America, for instance, it occurs as far south as Pensilvania, and in Asia is found in Astrachan. In Hudson's Bay, the north of Siberia, and in Kamschatka they are very common, and by no means rare in the north of Russia, Lapland, and the north of Sweden. To the southern parts of these countries, and to Poland, Prussia, and the north of Germany they only travel during winter; and although of uncommon occurrence they have been captured in



the heart of Germany, and also been seen in Switzerland. In the northern parts of Asia and America they are not unfrequently met with near the habitations of men. Mountainous and wooded country seems to suit their choice best; but in North America they are not uncommon among barren and perpendicular rocks.

It is said that the Snowy Owl is very shy; and such may be the case with a single wandering bird, when out of its latitude with us; but many instances have been recorded of these birds accompanying a sportsman during a whole day when out shooting, and of their seizing upon and consuming before his eyes the game which he has brought down with his gun; and even when a shot is fired, they come to the well-known sound in order to obtain food in an easy manner.

The cry of this bird has been compared to the grunting of pigs, or the lamentations of a person in great danger.

In their actions they are as agile as the Hawks; and in their flight bear more resemblance to them than to the owls in general. Their flight is quick and powerful; and they sometimes continue the chase in search of food all day long, even in hot summer weather; as although they can bear the severest cold, they do not mind a tolerable degree of heat.

They are said not to live long in confinement, although we can refer our readers to the beautiful specimens in the Zoological Gardens, which we have known there for some years, alive, and in good condition.

The food of the Snowy Owl is hares, rabbits, and other animals, and every kind of bird, as woodgrouse, partridges, &c. In the northern climates they consume a great quantity of ptarmigans. When on the look out for their prey, they fly near the ground, and strike the object of their pursuit with the feet, throwing themselves upon it in a slanting direction: the smaller mamalia are thus caught when running. If unable to obtain living food, these birds will feed on carrion.

The Snowy Owls build their nests according to report on rocks, or on the bare ground. They usually breed in high

northern latitudes: the female deposits three or four white eggs. In the north, where they cannot breed very early, the young do not fly before September. Some nests of these birds are said to have been found on the eastern shores of the Baltic: one of them was placed on the ground near a bush, and was composed chiefly of holly branches.

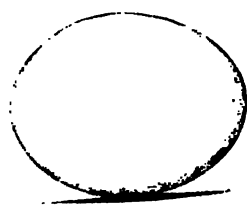
The Snowy Owl rarely makes its appearance in our latitudes; several individuals have, however, been met with in the Orkney and Shetland Islands, some in the northern parts of England, and a few stragglers have been found as far south as Norfolk. They have usually been observed in this country in open and exposed places, such as the moors of Northumberland, or on rabbit warrens on the sea coast.

At present we have been unable to obtain a specimen of the egg of this species; but trust we shall have the opportunity of representing it in some future number of the work.

The length of the Snowy Owl is above two feet, expanse five feet, length of the wing from carpus to tip seventeen to eighteen inches; the tail, which is wedge-shaped, measures ten inches; and the wings when at rest cover two-thirds of its length. The beak is black, powerful, and beautifully arched, and measures one inch and seven-eighths in the outer circle, from the forehead to the tip. The nostrils, which are placed in the thin black-coloured cere, large and round, and the iris of the eyes bright orange yellow. The legs are so completely and thickly covered with feathers, as to have the appearance of wool, and the large black claws are the only part visible, the soles of the feet even being entirely hidden by the feathering. The tarsus measures two inches and a quarter in length, the middle toe and claw three inches, and the hinder with the claw two inches: the claw of the inner toe is the largest. Of the beak there is only a small part visible among the bristling white feathers by which the face is entirely covered.

In very old birds the plumage is white as snow without any spots. Mature birds of less age are spotted with dusky

on the wings and back part of the head, back, shoulders, and breast; the latter frequently representing waved bars. Younger birds are generally marked and spotted as follows:—The face, throat, upper part of the breast, and woolly feathering of the legs are white; the top of the head and back part of the neck are marked with small round dusky spots, which become larger towards the back, but decrease in number on the rump; on the shoulders and wing-coverts the spots are numerous, and crescent shaped; those on the breast and side feathers are narrow, transverse, and of a lighter colour; the quill-feathers are marked with large dusky spots, and the tail-feathers, with the exception of the outer, which are quite white, have one half-moon shaped spot near the tips, and some dusky round spots near their roots.



37.



38.



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IN consequence of the omission, for the present, of the eggs of the Canada and of the Snowy Owls, we have taken the opportunity of representing, in its natural size, the beak of one of the Raptorial order of birds of prey, which we hope will be considered a desirable addition to the work. The subject chosen is the beak of the Golden Eagle; on similar occasions, the beaks, feet, or other parts of various birds, illustrative of the subject of the work, will be in like manner subjoined.

The No. 2 affixed to the present head agrees with the number assigned to the Golden Eagle in its own plate.

RAPTORES.

STRIGIDÆ.

PLATE XXVIII.

CANADA OWL.

STRIX NISORIA.

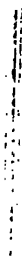
THIS Owl is about the size of the Short-eared Owl ; the head and face are, however, smaller, the wings shorter and more pointed, the tail much longer, and the beak more like those of the hawks. In point of form it bears much resemblance to the harriers.

In the size of various specimens there exists a considerable difference, without reference to its age or sex. In length this Owl measures from sixteen to seventeen and a half inches, in width from thirty-one to thirty-two inches ; the tail is seven and a half inches long, of which half is covered by the wings, and it is so much rounded that the middle feathers exceed the outer by two inches in length.

The beak is thick and beautifully arched, the upper mandible measures one inch in the arc, the lower is somewhat compressed at the edge, with a slight indentation near the tip. The eyes are not so large as those of other Owls ; the iris is sulphur-yellow.

The legs, as well as the upper part of the toes, are fully feathered, the tarsus an inch and a quarter long, the middle toe and claw one inch and three quarters, the hinder the same, but the claw alone occupies ten lines. The soles of the feet are dirty yellow ; the long, finely-arched, dusky





claws are thin and pointed, and the one on the middle toe has a sharp cutting edge on the inner side.

This bird resembles, in general appearance, the diurnal birds of prey, but its legs are of the usual shape of the night Owls.

The plain colouring of brown and white is very pleasingly distributed in this Owl, and much more regularly than is the case in others of its tribe. The region of the beak and the face are covered with yellowish-white feathers, intermixed with fine black bristles, which latter are particularly close about the sides of the beak and the corners of the eyes. The frame which surrounds the face of Owls in general is very imperfect in the present species; about the ears is an indication of it in the shape of a black crescent; the throat is white; the breast, sides, belly, and under tail-coverts are also white, crossed with narrow dusky lines, as in the sparrow-hawk. The tarsi and thighs are of a yellowish-white, with pale dusky cross lines, the upper surface of the toes also feathered with the same. The head is dusky, each feather marked with a round white spot in such a manner that the dusky retains the upper hand; the white predominates about the nape and the hinder part of the neck. The back, rump, and shoulders are brown; the scapulars are white in the outer webs; the wing-coverts are brown, with a few white spots; the quill-feathers are dark brown, barred with yellowish-white; the first quill-feather is slightly serrated; the tail-feathers are brown, with eight or nine white bars, and white tips.

The male and female are much alike, the latter is rather the larger. In the young the colours are less pure than in the adult.

The Canada Owl belongs to the northern regions of the globe. In Europe it is found in Sweden and Lapland, but is rare in Denmark; in Asiatic Russia it is more common.

In North America, particularly in Canada and about Hudson's Bay, it is of very frequent occurrence. In the central parts of the continent of Europe it appears at uncertain intervals, being some years quite unknown, and at other times, for several years in succession, sufficiently plentiful to be considered common.

The appearance of this bird in England is confined to a single specimen captured alive on board a vessel off the western coast; when taken it was apparently exhausted with fatigue.

This Owl is a bird of the woods, but frequents copses and swampy woods in preference to forests of larger extent. When on the wing, these birds make themselves conspicuous by moving in circuitous rounds from tree to tree. When in pursuit of their prey they fly slowly, and are sometimes seen to mount to a considerable height, even in bright sunshine. The chief periods that they pass in their chase for food are, during morning and evening, but soon after sunset they retire to the woods. Sometimes they have been observed to roost on the ground in marshy localities, in the manner of the harriers. On account of the transverse lines on the under parts of the body, as well as their hawk-like flight when on the wing, they have been called Sparrow-hawk Owls; they are, nevertheless, readily detected as Owls by their thicker head.

Mice, rats, and other small mammalia, constitute their usual food, as well as small birds; and they are said to feed on ptarmigans in the winter season.

They are bold birds, and accompany sportsmen, in the more northern regions, to share their game. They bear the loss of liberty easily and become very tame. Their voice is pleasant and soft, resembling that of the kestrel, and their call is often repeated in quick succession.

Of the breeding of these birds very little is known; they are said to lay two white eggs.



RAPTORES

STRIGIDÆ

PLATE XXIX.

LITTLE OWL.

NOCTUA PASSERINA.

This ~~inadequate~~ little bird is the smallest of the British Owls, and in confinement very amusing and interesting. It is generally considered to be a rare species in Britain, although its habits may be the means of keeping it from the view of men. From its small size, and habits of concealment, it may generally be overlooked by sportsmen who go in pursuit of birds during the daytime; and gamekeepers or poachers who are on the look-out for birds at night, are not likely to fire at so small and unpromising an object. Linneus had quite overlooked this bird, which speaks greatly in favour of our supposition, as that greatest of all naturalists generally noticed whatever came before him, and although rare in this country, why should he not have met with it in other countries where it is said to be plentiful? The habits of this bird differ in many respects from those of other Owls. Its flight is quite distinct from others of its congeners, and resembles in its jerking manner that of the woodpecker and chaffinch. During the night its flight is rapid and strong, and frequently directed towards the light, in consequence of which it now and then darts at a lighted window, to the great disturbance and alarm of the inmates.

In its nocturnal flight, it frequently utters its varied

cries, which sound something like *kew, kew, or kewitt*; when perched, it articulates *pooh, pooh*; and during the breeding season its call sounds something like a long drawn *cooweeck*. These varied sounds are still more modulated by the action of the air, if uttered when on the wing, and also in consequence of their being frequently mixed up together.

With exception of the highest northern latitude, this Owl is frequently found all over Europe; and in America, from New York to Hudson's Bay, but the central parts and south of Europe seem to be its favourite climate. In Holland it is common, and not rare in Switzerland; and all over the German states it is well-known. It seems to prefer the neighbourhood of men, provided it can avoid the immediate contact, as it inhabits towers and roofs of churches, which are seldom visited; vaults, tombs, holes, and crevices in fortresses, barns, and holes left in brick-work of any kind by the workmen for the purpose of fixing scaffoldings. Besides these hiding-places, it resides in young plantations in the vicinity of fields, or rocky country, where it can shelter during the daytime in a crevice of a rock or a high bank. It is also fond of hiding among the close branches in the top of a pollard tree,—any place, in fact, where the rays of the sun do not shine on it, and where it is hidden from the human eye; in such places it sits asleep during the day, but if disturbed flies off immediately.

Wherever these birds are found, they are either alone, at most in pairs, but never in companies. Their food consists of mice, beetles, and small birds, which they are said to lay up in store for any emergency; bats also become their prey. Small birds, as sparrows and larks, are surprised when they are at roost; half-a-dozen mice are said to be consumed by one at a meal.

This Little Owl has many enemies; the hawks pursue

it on account of its small size ; the weazel destroys its eggs, and if it ventures out of its hiding-place during the day, it is pursued and tormented by the rook, the magpie, or the jay.

During the breeding season, these Owls make a continual disturbance ; they fly about, chatter, and call out even during the day. They nestle in their usual hiding-places, in a lonely tree or a large osier bed ; they construct no nest, but deposit their four or five white eggs in a hollow, and the young are hatched after fourteen or fifteen days' incubation ; they are clothed with white down spotted with brown. The food of the young ones consists of the same articles as that of the parent birds, and they are easily tamed when taken and brought up from the nest.

In consequence of the shortness of the wings and tail of these birds, they are almost the shape of a ball, especially when they ruffle their feathers. They measure from ten to ten inches and a quarter in length, and twenty-one to twenty-two inches in expanse ; the tail is about three inches long, and straight at the extremity, and the wings when at rest extend three-fourths of an inch beyond it. The beak is very much hooked, and measures three quarters of an inch in length, in colour pale yellow ; the cere is dirty yellow, in some specimens greenish, and covers the round nostrils in the form of tubes.

The changeable colour of the iris of this bird adds greatly to its beauty ; in the course of a few minutes it varies from orange to silvery-white, passing rapidly through the various intermediate gradations of pearl-colour, sulphur, lemon-yellow, and bright gold. When several of these birds are in a cage together, these changes appear most curious and singular from the effect of contrast.

The appearance of the legs in this species is weak, the tarsi being closely covered with short feathers ; the toes

are only sparingly clothed with hair-like feathering, which allows the greyish yellow of the skin to show through to such an extent that, unless closely inspected, they seem quite naked; the soles of the feet are covered with small yellow warts. The tarsus measures nearly an inch and a half in length, the middle toe without the claw three-fourths of an inch, the claw itself nearly half an inch, and the hinder toe, including the claw, three quarters of an inch.

The hairy feathering of the face above and below the eyes is white, intermixed with yellow; the temples dusky with brownish-white, and surrounding the beak it is intermixed with black bristling feathers. The indistinct frame which only surrounds the face as far as the ears, is white, spotted irregularly with brown; the top of the head and back of the neck are greyish brown with oval white spots, tinged with pale rufous, and larger on the back than on the top of the head. The feathers of the shoulders, back, rump, and the wing coverts, are greyish brown, with a roundish white spot in the centre of each feather, which spot is divided in the middle by the dusky shaft; as these spots are not on the tips of the feathers, they are only seen in part unless ruffled, when they show very plainly.

The tail-feathers are like those of the back, but more brown than grey, with white tips, and five or six rufous-white spots on their edges, which form bars on the central feathers; the quill-feathers are darker greyish brown than the back, with the same square-shaped spots as the tail-feathers, the inner webs are whiter. The breast and belly are white, faintly tinged with rufous, and irregularly spotted or dashed with brown; these spots are larger, and consequently closer together on the upper part of the breast than lower down; the vent is yellowish-white without spots, as also the thighs and tarsi, the latter more tinged with rufous. The under wing coverts are white, with a few brown spots;

the under wing and tail feathers are marked faintly with the bars which shine through from above.

The female is a little larger than the male, which is, in fact, the greatest distinction in outward appearance between the sexes; the fainter markings and colouring depend more upon age and season than sex, and the colours are much more pure after the autumnal moult than at any other time, and the white markings more deeply tinged with rufous; the spots on the back and shoulders being frequently bordered with rufous. Young birds resemble the adult birds of the autumn, the white spots are larger, and the bars on the tail are more distinct.

The egg marked 29 belongs to this bird.

PLATE XXX.

TENGMALM'S OWL.

NOCTUA TENGMALMI. (*Selby.*)

THE adult Tengmalm's Owl has frequently been taken for the Little Owl of the preceding plate, in consequence of the resemblance in their colouring; but, if compared together, the more slender form of the present, and the longer wing and tail feathers, as well as the woolly feet of Tengmalm's Owl, show the difference at a single glance. The present species measures more in length and expanse, but its body is actually smaller than that of the Little Owl. Its length is from ten to ten and a half inches, and its expanse twenty-three; the rounded tail is four inches long, and the wing-feathers reach to within one inch of the extremity when closed. The feathers of the wings are broader and softer than those of the Little Owl; the third quill is the longest, and the two outer ones are serrated. The outer ear-covering is so very large that, when turned over, half the eyeball may be seen within the head.

The beak is pale yellow, much hooked, and measures one inch in the arc; the cere, as well as the sides of the beak, are in some specimens dashed with black; the iris is lemon-yellow. The legs and feet are covered with downy feathers, and the sharp black claws project out without the toes appearing, although the yellow soles of the feet may be perceived; on raising the feathering there may be seen



a large scale over the root of the claws. The tarsus measures nearly an inch and a quarter, the middle toe the same including its long claw, the claw alone in the arc being almost seven lines; the hinder toe and claw is about three quarters of an inch long.

The feathering of the face is white, streaked about the cheeks and over the eyes with dusky, and is between the beak and eyes very long; close before the latter is a black patch; the feathers of the ring which forms the border of the face are white with brown tips. The whole of the upper feathering of this bird is fallow-brown, the top of the head closely speckled with small oval white spots; the back of the neck, the back and shoulders are also spotted with white, the spots being largest and most conspicuous on the shoulders. The wing-coverts are fallow-brown, the lesser without spots, the larger sparingly spotted on the edges of the outer webs with white; the quill-feathers are also fallow-brown, with round corresponding spots on the edges of both webs; the secondary quills have a few spots, and the tertials have more markings which assume rather a square form. The coverts under the wings are white, spotted sparingly with brown. The tail is also fallow-brown, marked with four or five roundish corresponding white spots. The breast and belly are white, spotted and streaked with reddish-brown. On the whole of the under parts the white predominates, the feathers being only tipped with brown; the covering of the legs and feet, and the long feathers of the vent, are white, the former a little tinged with yellow.

It is difficult to know the female from the male unless compared together, when the following distinctions may be observed;—the white of the face is dirty, the black spot before the eye smaller and paler, the lower part of the body more strongly spotted, and the brown of the upper parts more decided than in the male.

The young birds, before their first moult, differ very much from the adult, and might very easily be taken for different species; they are in every respect smaller than the parent birds, measuring only nine inches in length; the legs are covered with a more feathery substance, in consequence of those feathers being short. The beak is yellowish-grey, the iris yellow, the hair, and bristle-like feathers of the face black and dusky, with white roots; the frame around the face but very indistinctly coffee-coloured, a little spotted with white over the eyes; the whole bird is coffee-coloured, somewhat paler below than above; the belly and feet whitish, intermixed with brown, and the dirty-white vent-feathers tipped with brown. On the quills and tail-feathers are a few small, round, and three-cornered white spots which form, on the closed wings and tail, four cross bars. The first quill-feather is serrated; the soles of the feet yellowish-grey. The feathering of this Owl is particularly soft and loose, and it erects the feathers of the face occasionally to a considerable extent.

The temper of this bird is milder than that of the Little Owl, although he resembles it in outward appearance so much. All day long it sits on a branch, or in a hole of a tree, asleep, and does not move on the approach of man, but looks at him with half-closed eyes, and only squeezes itself closer against the tree on which it perches. When in confinement, Tengmalm's Owl is easily tamed, even when taken in the adult state. It assumes very amusing positions when caged, and erects the feathers of its face in such a manner as almost to form blunt ears, which it certainly does not possess in reality. Its flight is lighter and softer than that of the Little Owl, in consequence of the longer and broader wings, and bears most resemblance to that of the Scops-eared Owl.

The notes which the Owl at present under consideration utters are, a repeated call of *kew, kew*, followed by an equally

repeated *cook* ; and during the breeding season a pleasing piping call of *cuk, cuk*, which is kept up for several minutes at a time.

These Owls are said to breed in a hole in a tree, and to construct no manner of nest. The egg numbered 80 belongs to this species.

Whether its great resemblance to the last-mentioned Owl, or some other reason can be given for the unfrequent capture or notice of this bird, is difficult to say ; but, although it has been obtained in almost every part of Europe, the collectors find it difficult to procure specimens for naturalists.

The Tengmalm's Owl is never met with in buildings of any kind, but frequents either thick pine forests, among the low foliage, or perches in an old stem of a tree, or in a hole in a tree ; also, in extensive orchards, pollard trees and juniper trees are a favourite hiding-place with it, as well as with other Owls. Its food consists chiefly in mice of all sorts, small birds, and insects, which are obtained during the night season only, and before sunrise these birds return again to their hiding-places : they eat but little at a time, and never swallow their prey whole.







Pl. 31.

*INSESSORES
FISSIROSTRES*

MEROPIDÆ

PLATE XXXI.

ROLLER.

CORACIAS GARRULA. (Linn.)

THIS beautiful bird, an accidental wanderer to this country, may be readily distinguished from all other British birds by its splendid colouring, which bespeaks it to be of tropical origin.

The Roller is met with from the southern parts of Norway to the frontiers of Senegal. Throughout Europe this bird is of migratory habits. It is seldom seen in Britain, but visits the south of Europe very frequently, on its passage to Africa, where it passes the winter.

In its habits the Roller is very shy, and, unless an opportunity is offered for an observer to keep out of sight, it is very difficult to obtain a close view of it. In the morning, it may sometimes be seen in the country where this species abounds basking in the early rays of the sun, but its restless habits do not allow it long to remain stationary in one spot. Its favourite haunt is among trees, where it is continually moving from branch to branch and from tree to tree, perching chiefly on the bare projecting ends of the dead branches: it is not often seen on the ground, and its movements when it does alight are awkward and embarrassed, and its mode of progression is rather by hopping than by walking. The flight of the Roller is quick and exceedingly buoyant,

resembling that of the pigeon. When flying, he flaps his wings very hurriedly, and tumbles frequently over and over. The temper of these birds is very turbulent and quarrelsome; they bite and fight with those of their own species, although they are in the habit of living very amicably with other birds, except the birds of prey. Their battles are carried to such an extent that they frequently fall to the ground together hanging by their beaks, and become in this state the prey of foxes, dogs, &c.; and in these angry contests they often pull bunches of feathers out of each other's heads, so that a specimen when obtained has frequently the head partly divested of feathers, or young feathers in the quills are seen about it, which can only be attributed to this cause, as these birds do not moult during the time they remain in our climate. Although they are so pugnacious and quarrelsome, they are usually observed to breed in society, one single pair being rarely seen alone at that period. When these birds arrive at their summer breeding-place, the males commence their vociferous and noisy quarrels, which continue until their mates are chosen, and they begin to be employed in the cares of incubation. The localities usually chosen for this purpose are the outskirts of woods of birch intermixed with oaks or pine trees; they build their nest in a hole in a tree, preferring shallow places, which they line with small fibres, straw, feathers, and hair, on which the female deposits from four to six very polished white eggs; these are incubated by both male and female during three weeks, and the parent birds sit so very close that they are frequently taken with the greatest ease upon the nest. The young are fed by the parents with insects and their larvæ. They are soon able to leave the nest and follow the parent birds into the fields, where they may be seen seated upon an elevation such as a stone or naked branch, from which they dart at the passing insects in the manner pursued by the flycatchers.

The same pair return often again and again to the spot they frequented the previous year, provided they have not been disturbed; they are particularly attached to their young.

These birds find very inveterate enemies in the buzzard species: weasles destroy many a nest and brood of the Roller.

Sandy and undulating countries are chiefly frequented by this species; swampy and mountainous parts they avoid, even during their migrations, if possible. They are summer visitants with us, although of rare occurrence.

The Roller measures thirteen inches and a quarter in length, and twenty-seven inches and three quarters in expanse; the middle tail-feathers measure above five inches in length, and are rounded at the tips; the outer feathers are narrower at their extremities, and extend five to six lines beyond the rest. The wings, when closed, cover two thirds of the tail.

The head is thick, the beak rather large, and compressed at the edges; from the forehead to the tip it measures one inch and a quarter, and is of a dusky horn colour. The nostrils are exposed, open, oval, and forming a slanting aperture. The iris is dusky, surrounded with a rim of grey or dusky-grey; the rings and strong bristling beard-feathers brown, and behind the eye is a three-cornered, naked, brown patch, or skin. The inside of the beak and swallow, and the tongue, are yellow; the latter is lancet-shaped, and fringed at the tip with brown hairs. The legs are stout, and feathered below the knee; the tarsi and upper surface of the toes are covered with coarse scales, and reticulated beneath. The tarsus measures one inch in length; the middle toe, with the claw, one inch and a quarter, and the weak hind toes hardly one inch.

The forehead and chin are whitish, the head, neck, breast, belly, thighs, of a fine bright greenish-blue, which colour,

like that of the kingfisher, varies according to the light from blue to green. This colouring is lightest on the shafts of the feathers of the neck and breast. The back and hinder wing-coverts and shoulders are bright cinnamon-brown. The lesser wing-coverts and rump feathers splendid violet-blue, with a peculiar coppery tint. The coverts of the quill-feathers, or the feathers of the thumb, are pale blue. The narrow webs of the four first quill-feathers are black, tinged

with green; the four succeeding are pale-blue from the roots to their middle, on the narrow webs, then violet, ending in black, whitish on the broad webs, and terminating in black; the remaining quills somewhat darker. All have dusky shafts, and all are, on the under parts, of a splendid blue, except towards the roots, which are greenish. The tail-feathers are, on the narrow webs towards the roots, fine violet, and pale blueish-green towards the tips, and the same all over the broad webs; the two middle feathers uniform olive-brown; the rest, with the exception of the outer ones, have a large blue spot, and the outer feathers are tipped with black; they are also larger and more pointed than the rest. The under part of the tail is dark-blue, and very pale blueish-green towards the tip, with a black spot on each side, which spots form the tips of the outer feathers.

Very old females resemble the males so much that they can hardly be distinguished.

The colour of the young females is invariably duller; the under parts are paler, and more inclining to green; the brown on the back is paler and greyer, the violet colour more dirty, and the blue under the wings is less dazzling; the tips of the quill-feathers are also more rusty-black, edged with dirty-whitish-green, and the tail-feathers of equal length.

The plumage of these birds does not obtain its full brilliancy before the third or fourth year in a wild state.

The young birds, after the first moult, are feathered as follows: the eye is brownish-grey, the beak brown, black towards the tip, and yellow on the corners of the gape; the legs pale yellow. The head, neck, breast, and belly, are dirty brownish-grey, with paler tips to the feathers, which reflect a weak olive-brown colour; the vent is whitish, tinged with bluish green. The back, shoulders, the hinder quills, and the greater part of the hinder wing-coverts, rusty yellowish-grey, in certain lights, tinged with olive and pale brown edges to the feathers. On the bend of the wing there is hardly any violet to be observed; the larger wing-coverts dirty bluish-green, as also the roots of the secondary quills, their extremities violet-black, with narrow dirty-white tips and edges. This latter extends to the quills of the first order, of which the first has a streak of bluish-green on the outer sides; the second has a brown streak towards the root, and the last has the root bluish-green, which colour extends over the wing-coverts. The somewhat irregular shaped tail is of an olive greyish brown, with a bluish-green reflection on the outer side. The under parts of wings and tail as in the adult, but less brilliant.

In the nest feathering these birds are very dull coloured; the head, neck, lower part of the back, and the whole of the under parts, are tinged with a dirty pale greyish-green; the upper part of the back and shoulders greyish brown, with an overpowering tinge of dirty green; wings and tail as in the last described; the iris grey, the legs pale brownish-yellow.

Their moult takes place in the warmer countries towards autumn, as they are most brilliant in the spring when they return to Europe.

The name of *Garrules* is very properly bestowed upon these birds, as they make a continued chattering which most resembles that of the magpie. Their call is harsh and shrill,

sounding like *rakker, rakker!* which is repeated in quick succession, and when they are at high words together, they utter with it another note, something like *wrah, wrah!* a plaintive call of *crea!* is their call note. During the time of incubation, the male mounts to some height in the air, provided the weather is fine, and repeats his varied calls; he then throws himself quickly down, tumbling over and over, and resumes his station on a dead branch.

Mature birds, when taken, never become tame, or long outlive their freedom; but if taken from the nest, they may be brought up, provided they can be supplied continually with fresh liver, which is found to be the most digestible food for them. They may be brought up also upon insects, worms, small minced meat, &c., and they soon learn to feed themselves, and, by degrees, will live on lark's food. They become accustomed to their keeper, but to strangers they remain wild and shy.

The food of the Roller consists of insects, such as beetles, grasshoppers, &c., also the larvæ of insects, worms, and small frogs. These birds eject the hard wing-coverts and legs of beetles and other insects, in the same manner as the birds of prey. They are said never to drink.

The egg No. 31 belongs to the Roller.



M. 3°

INSUSSORES.
FISSIROSTRES.

MEROPIDÆ.

PLATE XXIII.

BEE-EATER.

MEROPS APIASTER. (Linn.)

THE BEE-EATER has, in several instances, been taken in this country, according to the testimony of several authors, but it appears only during its migration as an occasional visitor from the warmer climates of the old world, where this species chiefly resides. Whenever one of these birds has been obtained in England, it has been observed to be in company with others of its species, and such little flocks have possibly been driven out of their course by contrary winds, or have deviated from it in pursuit of a swarm of insects, which, like a will-o'-the-whisp, has led them astray. As these birds associate in society, like the swallow tribe, and take their food upon the wing, our supposition of the manner in which they stray to this country is more than probable. England appears to be their most northern limit, and cannot be considered as of a suitable temperature for them, since the climate cannot possibly be mistaken for a warm one.

The beauty of the feathering of this bird must be acknowledged to surpass all others in the list of British birds. The colours of the mature bird are vivid and rich, and disposed as follows:—the forehead is white, beyond which is a band of emerald green, extending from eye to eye. A black band

runs from the beak, through the eye, to the back of the coverts, and from thence it continues in the form of a g round the lower part of the throat, where it divides golden yellow that covers the throat, cheeks, and sw from the emerald green of the breast. The top of the and nape are of a rich chesnut-brown, extending ove wing-coverts, and half way down the back, but in a li tint.

The lower part of the back is golden-yellow, the tail-coverts are blueish-green, tinged with a gold cast lesser wing-coverts are olive-green, the larger rufou cinamon-coloured, here and there tinged with green secondary quill-feathers are cinnamon-brown, with black the primary quill-feathers are greenish-blue, with black and brown edges on the inner webs; the shafts of a quills are black and strong; the edge, or carpus-fea of the wing, and the small under-coverts, pale rufous. tail-feathers are blueish-green, tinged with yellow, the tips of the two middle feathers and shafts are black the under surface the tail is pale grey, the shaft w The iris is carmine-red, and the legs and feet are pal dish-brown; the claws are dusky.

The young males are more dull in colour, the chesnut paler; the black band about the throat greenish, and middle tail-feathers extend but little beyond the rest iris is rose-red.

The adult females have the colours more intermixe confused, they are duller in tint, and the central tail-fe are two lines shorter than in the male.

The full grown Bec-eater measurs, from the tip of beak to the extremity of the middle tail-feathers, ten and a half, and the expanse is above eighteen inches length of the wing, from the carpal joint to the tip,

six inches, and the wings, when closed, reach to within one fourth of its length. The quill-feathers are very narrow and pointed, and have very strong and stiff shafts; the first quill-feather is exceedingly small, the second is the longest in the wing.

The tail feathers are twelve in number, and of equal length, except the two central ones, which extend in adult birds one inch beyond the rest. The beak is very hard in texture, an inch and a half in length, and perfectly black; it is five lines in height at the base, and five and a half lines wide; it is gently curved, sharp-pointed, and rather compressed; the upper mandible has a strong blunt ridge, and is a trifle larger than the under-one, the edges of both very little indented and fitting very close; the inside is also black, and strengthened with three ridges extending from the base to the tip. Nostrils, which are small, are placed close to the forehead; they are round, and partly covered with stiff bristling feathers; behind the eye is a small naked brown patch. The legs and feet are very short, and naked for nearly half an inch below the knee; they are finely scaled behind, and very strongly in front. The upper surface of the toes is scutellated. The small hind toe is very broad at the sole, the three front toes are connected together, in the manner of the kingfishers; the tarsus measures from six to seven lines, the middle toe ten lines, including the claw, which is four lines, the outer eight and a half, and the hinder six.

The localities most frequented by the Bee-eater are the precipitous banks of rivers among which they breed; they also resort to vineyards and valleys that are full of flowering plants, as in such places their favourite food abounds. In the warm parts of Asia and Africa these birds are very common, and are to be seen skimming about in thousands. Many parts

of Europe are also frequented by them, although not in so great abundance. They are found in France, Switzerland, and Germany in small numbers; in Italy, Sicily, and Spain they are more frequent, and also in Turkey and the Grecian Archipelago. These countries are their summer residence, and in winter they retire further to the south, and seek refuge in the warmer climates of Africa.

The Bee-eater is entirely insectivorous; its food consists of the bee and wasp tribes, of beetles, grasshoppers, gnats, &c. In Italy these birds are esteemed good eating, and are caught and sold in the markets as an article of food.

The rarity of the Bee-eater in this country renders it but little known, except as a cabinet specimen, but even in this state the beauty of its plumage is very considerable, how much more splendid must be its appearance in a natural state, when the rays of the sun shine upon its brilliant plumage? Where they are indigenous, these beautiful birds are to be seen flying about the whole day as numerous as the swallows in our own country, pursuing the chase for food, which they also, in common with their tribe, take upon the wing. In their manner of breeding, these birds resemble the sand-martins, and for this purpose choose similar situations, namely, sandy banks by the river side. They associate together in great numbers at this season, and form their excavations so close together in the bank chosen for this purpose, that it has the appearance of a honey-comb. These perforations are effected by means of their arched beaks and hand-like feet, with which they scoop out circular passages, from three to six feet in depth, of sufficient size to admit their body, along which their short legs enable them to run with facility. At the end of this passage, a larger excavation is made, somewhat resembling an oven. In this dormitory, a slight nest is arranged of moss and other

soft materials, on which, in the month of May, the female deposits five or six white eggs.

Their note, which they utter on the wing, is loud, and sounds like the syllables *grillgriririll* ! and also *sisicrewee* ! according to the testimony of an old and learned author.

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INSESSORES.
FISSIROSTRES.

HIRUNDINIDÆ.

PLATE XXXIII.

SWALLOW.

HIRUNDO RUSTICA. (Linn.)

EARLY in April, if the weather is warm, and the wind favourable, a few swallows begin to make their appearance, the precursors of the multitudes that annually repair to these shores from their winter sojourn in warmer latitudes.

The first appearance of these interesting birds is always hailed with pleasure by all who love the pleasant sounds and sights of nature, for they bring with them thoughts of summer.

Although arriving in large flights upon our coasts, they afterwards disperse and penetrate by degrees further into the country ; a few alone at first are seen among us, coursing in their never-ending chase for food ; by degrees their numbers thicken, until the air is again peopled by this interesting race.

The Swallow always makes friends among us ; its useful and harmless life and social habits attract our notice, and its familiar approaches to our dwellings make it looked upon as half domesticated ; it lives among us, yet independent, requiring of us nothing but quiet possession of its accustomed nook or chimney. The Swallow is almost as much respected and cherished as the redbreast himself, and shares, with that favoured bird, exemption even from the persecution of village

boys, who, apt enough to throw the ready stone at every other of the feathered tribe, pause and desist in favour of the Swallow. This favourable prejudice is also in some degree extended to the house-martin; we remember to have had some difficulty in obtaining specimens of the eggs of this latter species in consequence of the prevailing opinion that it was ill-luck to take them.

About a month after their arrival in this country, Swallows may be seen gathering from the edges of pools and streams the materials of which to form their nests. These consist of little clods of loamy earth, with which their cup-shaped nest is constructed, intermixed with straws or grasses, and warmly lined with feathers. The situation chosen for the nest varies greatly; with us it is most commonly placed in a chimney, a little way down the shaft, as the warmth of such a locality is agreeable to them. Sometimes it is constructed in a cleft of a rock, or beneath the arch of a bridge, or in any similar situation of equal shelter and convenience.

Four or five is the usual number of their eggs; they are white, speckled with dark-brown, grey, and rufous, mostly resembling the one represented in our plate (fig. 83). The young birds, as soon as fledged, may be seen sitting in a row upon the edge of their chimney, waiting to receive their food from their parents. Even after they can fly this parental care is still continued, and the young are often seen receiving food from the parent birds as they pass upon the wing.

These indefatigable birds appear to take no rest, and to require none, and probably remain the greater portion of our summer days upon the wing, alighting only now and then upon some elevated spot, such as a roof or chimney, and almost instantly resuming their accustomed flight.

How much a summer-scene is enlivened by the swallow! although he adds little to the *voice* of nature, and therefore

gladdens our oral sense less than the unseen little warblers that, hidden within the covert of a neighbouring bush, pour out their liquid melody on the ear; yet these delight the eye by their ever-glancing flight, passing and repassing us with noiseless wing; sometimes dipping their glossy wings into the stream, or sweeping an insect from its surface, then, shooting past us quicker than the eye can follow, they turn and wheel as if delighting to evade our eager sight.

We always miss these active little birds, and feel, when they have departed from us, an autumn scene is blank and cold without them.

The rich and glossy colouring that distinguishes the Swallow from the other species of British *hirundinidae*, is seldom to be perceived unless the bird is taken in the hand, or the spectator be so favourably placed upon a bridge or cliff that he can look down upon it as it skims beneath him; then, if the sun shines upon its glossy plumage, the vivid violet reflections upon the feathers of the back and scapulars may be plainly seen.

When the time for their annual autumnal migrations arrives, these birds collect in large companies of many hundreds, in anticipation of their approaching journey. We have known them for many years to collect in this manner on a particular house during several successive mornings, twittering and chirping as if arranging their course, ascertaining their geographical position, or settling the particulars of their journey; after a few days thus spent, they have suddenly departed.

The house so long selected for the place of rendezvous by the Swallows of this district, is situated on the southern outskirts of the town, and about nine miles from the nearest sea-coast, the coast of Suffolk. Whether these birds take their flight direct from this spot for their winter quarters in warmer latitudes, or whether they pursue their tour by easy

journeys towards the southern coast, we have no means of ascertaining; but in all probability the former is the case, as the great power of wing possessed by this species would enable them, without fatigue, to reach beyond the limits of the island long before the setting of the sun.

In their pursuit of insects the Swallow may frequently be seen flying along the ceiling or roof of large buildings, such as churches, &c.; or along walls and palings for the purpose of rousing up any winged insects that may be at rest upon them, which they are then able to capture. In heavy weather, or previously to rain, when the air is chilled, Swallows may be seen to abandon the upper strata of air, and to fly near the ground, as at such times the insects that constitute their food do not ascend; a continuance of wet weather is also hurtful and sometimes fatal to them. At such times they are compelled to resort, in search of food, to the shelter afforded by avenues of trees or overhanging cliffs, or they are seen to pursue their prey low along the surface of the water, where it is sheltered from the inclemency of the weather by the river's bank.

The Chimney Swallow measures about eight inches and three quarters in length, from the tip of the beak to the extremity of the tail, and fourteen inches in width from wing to wing. The wing from the carpus to the tip is five inches long, the larger quill-feathers are particularly strong, and the shafts are powerful and arched, the secondaries are very short with slanting tips. The tail is much forked, the middle feathers measure one inch and seven-eighths, the outer frame four inches and three quarters to five inches in length; the wings when at rest reach to about the middle of the tail. The beak is small, three eighths of an inch long, slightly curved at the tip, and pointed, and four lines in breadth at the base, and one line and a half high; the gape extends to beneath the eyes, and is more than half

an inch in width; the nostrils are small and oval-shaped. The colour of the beak is black, the tongue and inside of the mouth flesh-coloured, and the iris is dark chesnut. The small slender legs and feet are entirely bare of feathers, their upper surface covered with small scales, and the claws are weak, thin, and pointed; the legs are reddish grey, the claws almost black, and the soles of the feet grey; the tarsus is five and a half lines long, the middle toe and claw seven and a half lines, and the hinder toe and claw five lines. The forehead and throat are reddish-brown; the space between the beak and eye and the region of the eyes are black. The head, cheeks, and neck, as far as the breast, the back, shoulders, and lesser wing coverts, are deep black, with blue and violet reflections. The wing and tail-feathers black, with bronze reflections and pale brown edges, particularly towards the tips of the feathers. The middle tail-feathers are entirely black, the others have a round white spot on their inner web towards the tips; these spots increase in length as they approach the outer feathers, and form a bar of white when the tail is spread out, but when closed they are not perceptible. The breast, belly, and all the under parts to the tail are white, more or less tinged with rufous, which colour is strongest on the under wing-coverts, and terminates at the edge of the wing in a border of black, brown, and white. The wing and tail-feathers are dull black on the under surface; the white spots on the tail-feathers shine rough and appear like a band or chain of spots. All the feathers of the back which reflect the blue tint are black only on their tips and white towards the root, and it is in consequence of this that the bird seems to have white spots all over its body when the feathers are ruffled or displaced. There is very little difference in the plumage between the male and female; but, when compared together, the female appears the smallest on account of her shorter tail-feathers,

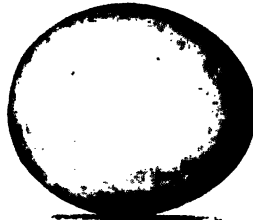
the red-brown on the forehead does not extend so far, the black about the front of the neck is not so broad, and the rufous on the under parts much lighter.

On the return of the Swallows to us, in the spring of the year, the feathering is quite perfect, in consequence of their having moulted in warmer climates during the months of January and February.

The young birds, which are sparingly covered with a grey down in the nest, soon obtain the feathering of the adult, but they are entirely without the reflected colours, and the feathers lie less close. The upper parts are dull black with bronze-green reflections; the red-brown on the forehead and throat are much paler and dirty-coloured. The outer tail-feathers are considerably shorter and frequently differ as much as an inch and a half: the corners of the mouth are dull yellow, the iris brown, the legs reddish black, the soles of the feet grey.

The lower figure in our plate represents the adult bird, the upper figure the young.

Some remarkable varieties have been found of the Swallow, such as pied black and white; perfectly white, which are the most rare: yellow or dirty white, which have an indication of red brown on the head and chin; a silver grey one has been seen, with the same red on the head and throat; and cream-coloured varieties have also been met with.



31.



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as the upper surface of the toes; the soles of the feet are also flesh-coloured, the claws have dusky tips, are long and very sharp, but not much hooked. The tarsi measure five lines and a half, the middle toe, including the claw, seven lines, and the hinder toe and claw, four lines and a half; the outer and middle toes are connected up to the first joint.

The hollow regions of the eyes, and the space between them and the beak, are velvet black; the top of the head, nape, back, shoulders, and the upper tail-coverts are deep black, with steel blue reflections. The wings and tail dull-black, with bronze-green-coloured reflections on the smaller feathers, and the three latter short quill-feathers have generally a narrow white edge near the tip; the edge of the wing is dusky and white, scalloped or scaled, the under wing-coverts brownish-grey, or pale-grey. The rump and all the under parts are white, although some few specimens have grey shafts to the under tail-coverts, or two black spots on the tips of the feathers. The under parts of the wings and tail are glossy blackish-grey, and the shafts of the larger feathers greyish-white.

There is hardly any difference in the outward appearance of the sexes; in some instances the male is a little larger than the female, his feathers are more glossy on the upper parts, and the white on all the under parts is more pure; but these differences are so very little that the question cannot be decided but by dissection.

The young Martins of the first summer much resemble the adult birds, but the upper feathering is paler, the gloss on the head is wanting, the tertials are distinctly bordered with white, the chin and throat, the rump and under parts are also frequently tinged with red, or spotted with grey; the lower part of the beak is dirty flesh-coloured, the corners of the mouth and eyelids, yellow, and the feet are very thinly feathered with down.

INSESSORES.
FISSIROSTRES.

HIRUNDINIDÆ.

PLATE XXXIV.

MARTIN.

HIRUNDO URBICA. (Linn.)

THE principal distinguishing marks of this bird are as follow:—the whole of the upper parts are glossy black beneath, and on the rump perfectly white; the legs and toes feathered all the way down, and white. These particulars are sufficient at the most hurried glance to decide its proper name.

The Martin is smaller than the swallow, owing, in a great measure, to its shorter tail; its head is bigger than that of the former. In length, this bird measures five inches, and twelve inches in expanse; the length of the outer feathers of the tail is two inches and five-eighths, the middle feathers do not exceed one inch and three quarters. The wings, when at rest, reach almost to the extremity of the tail, and measure, from carpus to tip, four inches seven lines. The beak is three lines from the forehead to the tip, and broader at the base than long, one line and a half in height, blunt at the tip, and a little arched on the upper mandible; black inside and out, with the exception of the wide swallow, which is pale yellowish-red at the back; the nostrils are small and round, and are placed very near the base; the iris is dark-brown. The legs are short and weak, flesh-coloured, and covered with small white feathers, as well

as the upper surface of the toes; the soles of the feet are also flesh-coloured, the claws have dusky tips, are long and very sharp, but not much hooked. The tarsi measure five lines and a half, the middle toe, including the claw, seven lines, and the hinder toe and claw, four lines and a half; the outer and middle toes are connected up to the first joint.

The hollow regions of the eyes, and the space between them and the beak, are velvet black; the top of the head, nape, back, shoulders, and the upper tail-coverts are deep black, with steel blue reflections. The wings and tail dull-black, with bronze-green-coloured reflections on the smaller feathers, and the three latter short quill-feathers have generally a narrow white edge near the tip; the edge of the wing is dusky and white, scalloped or scaled, the under wing-coverts brownish-grey, or pale-grey. The rump and all the under parts are white, although some few specimens have grey shafts to the under tail-coverts, or two black spots on the tips of the feathers. The under parts of the wings and tail are glossy blackish-grey, and the shafts of the larger feathers greyish-white.

There is hardly any difference in the outward appearance of the sexes; in some instances the male is a little larger than the female, his feathers are more glossy on the upper parts, and the white on all the under parts is more pure; but these differences are so very little that the question cannot be decided but by dissection.

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The young male and female are perfectly alike.

Varieties of this species are not uncommon ; the white are the most beautiful, with red or amber-coloured iris ; some are pied, with white wings and tail, or white heads. The variety in which all the black is dirty or brownish white, and the remainder, as usual, pure white, is very handsome, but must not be mistaken for the bird of the same name (*H. U. pallida*) of Latham and Bechstein, which differs in many respects.

The Martin is distributed over all the countries inhabited by the swallow, and goes further north even than that species. During the summer this bird frequents our country, arriving as soon as the spring is sufficiently advanced, towards the end of April or beginning of May, and generally after the swallows have made their appearance. A few forerunners are, by chance, seen earlier, but the great flocks do not generally come before the month of May. Their departure commences usually in September, and takes place a few days before that of the swallows ; they fly, it is said, by night, and travel in flocks at a great height. These birds are remarked to congregate in large numbers together some days before they take their departure ; and, after settling on some raised object early in the morning, and basking in the sun, they start off repeatedly as if by a given signal, and return again and again with great clamouring ; it almost seems as if they practise their mode of travelling, and train themselves for their journey. During these manœuvres, they mount quickly to a great height, and the same minute descend again with such velocity that the noise occasioned by their wings may be heard very plainly. It has been said that Martins prefer towns to country places, but we cannot agree in that supposition, as there must be more insects in the sweet air of the country than in smoky towns.

The flight of the Martin is not so quick as that of the

swallow. When a bird of prey approaches the swallows and Martins flock together, but, as soon as the danger is past, the species separate again.

During the breeding time Martins frequently quarrel, and the victor either drives his antagonist out of the nest, for the possession of which the dispute has arisen, or he pulls him out of it by the head, in which act they mostly fall together to the ground.

Martins are seldom seen to perch upon the ground, the construction of their feet is more adapted for holding fast, or when in a vertical position, in constructing their nests, &c.

The call-notes of the Martins are various, but hardly possible to be described in words or letters; *skirr*, *sreeb*, *stræ*, &c. are among them: the young birds call the word *brid* while in the nest but very faintly, and the song with which the male bird tries to amuse his wife while in the nest is a

never-ending chattering, by no means pleasing. The social disposition of the Martin is very remarkable; they seem to entertain no fear for man: in proof of which the following fact was communicated to us by a friend. A pair of Martins chose for their breeding-place a sheltered corner in a projecting window shade, such as are seen in Venetian pictures; here their plastered nest was built, and their young, four in number, reared, regardless of any interruption from the inhabitants of the room, although they were within the reach of them, and constantly within their sight. The young birds, when strong enough to leave the nest, sat upon the bar within the frame until tempted by the parent birds to fly. In the course of the autumn the shade or frame, being a moveable one, was taken down as usual, and carefully laid away, in order that the nest might be preserved. On the following spring the shade, still containing the nest, was replaced above the window, in the hope that the Martins might return and resume possession of it. They did return, and

paid it several visits, but, for reasons known only to themselves, they finally abandoned it.

We have often observed that Martins appear very whimsical in their choice of a nesting-place, beginning and abandoning sometimes many nests before a site is determined upon. This occurred on our own house during the past summer : many nests were commenced, and the little builders were seen from time to time bringing materials gathered from the borders of the Thames, plastering a layer with their little beaks, which they use in the manner of a builder's trowel ; many were thus commenced, but not one carried to its completion, and all were at last forsaken. They had met with no molestation, as, on the contrary, we were anxious to protect them, and we could only conclude that the situation being much exposed both to sun and wind, the materials had dried too quickly to insure their tenacity : some fragments that fell from them on the window frame seemed to favour that opinion, as they crumbled to the touch ; these fragments contained angular pieces of flint, but did not appear to have been cemented together by a saliva, as is usually supposed.

The size of the nest of the Martin is about six inches in diameter from side to side in the interior ; the thickness of the wall of the construction is about half an inch on the sides, and about an inch at the bottom ; the inner surface is smooth, but the outside knotted in consequence of the rough lumps of clay retaining their original form : the only lining these nurseries obtain is a few feathers to cover the bottom. The nest, when ready, not only serves the pair for the bed-room, but the birds continue to inhabit it during the whole breeding season. The female sits twelve or thirteen days upon her eggs, which are from four to six in number. During that time the male supplies her

with food, except in wet weather, when the scarcity of the supply drives her out also for her own preservation. While the young birds are small, the parents both continue to pass the night in the nest.

The egg No. 34, belongs to this species.





The feathering of the Sand-Martin is dull and inconspicuous, the upper parts being mouse-colour, the wings and tail darker, the under parts snow white.

The more particular distribution of the colours is as follows:—the top of the head, back, shoulders, rump, temples, cheeks, sides of the breast and thighs, mouse-coloured; the sides of the throat the darkest, the forehead and rump the palest, the feathers of the first frequently with white edges; the throat, swallow, a patch on the sides of the neck, the breast, belly, and under tail-coverts pure white; on the chest, a pale grey band, and close beneath, a few grey spots; the feathers of the wings and tail are darker than the rest; the under parts of the wing deep mouse-colour; the wing and tail-feathers beneath are lighter than on the upper parts, and the shafts of the feathers are white.

The male and female are exactly alike in colouring, the female somewhat smaller. As these birds also moult during their absence from us in warmer climates, their plumage is the most perfect on their return here in the spring, and the whole of the feathering has the appearance of silk. During the summer the gloss becomes worn off, as well as the white edges of the feathers, and the general colour is paler and less pure.

The young Sand-Martins of the year, when they depart from us, differ in many respects from the adult; the grey is somewhat darker, approaching to dusky; on the head, back, and wing-coverts, the feathers are edged with dull rust-yellow, which is not unfrequently divided from the ground colour by a darker band; the tertials have the same borderings but broader; the throat is dashed with brown and rufous, very frequently spotted with grey. The legs are paler than in the adult, and without the little tufts above the hind toes. Varieties are seldom met with among the Sand-Martins, although they have occurred.

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HIRUNDINIDÆ.

PLATE XXXIV.

MARTIN.

HIRUNDO URBICA. (Linn.)

THE principal distinguishing marks of this bird are as follow:—the whole of the upper parts are glossy black beneath, and on the rump perfectly white; the legs and toes feathered all the way down, and white. These particulars are sufficient at the most hurried glance to decide its proper name.

The Martin is smaller than the swallow, owing, in a great measure, to its shorter tail; its head is bigger than that of the former. In length, this bird measures five inches, and twelve inches in expanse; the length of the outer feathers of the tail is two inches and five-eighths, the middle feathers do not exceed one inch and three quarters. The wings, when at rest, reach almost to the extremity of the tail, and measure, from carpus to tip, four inches seven lines. The beak is three lines from the forehead to the tip, and broader at the base than long, one line and a half in height, blunt at the tip, and a little arched on the upper mandible; black inside and out, with the exception of the wide swallow, which is pale yellowish-red at the back; the nostrils are small and round, and are placed very near the base; the iris is dark-brown. The legs are short and weak, flesh-coloured, and covered with small white feathers, as well

as the upper surface of the toes; the soles of the feet are also flesh-coloured, the claws have dusky tips, are long and very sharp, but not much hooked. The tarsi measure five lines and a half, the middle toe, including the claw, seven lines, and the hinder toe and claw, four lines and a half; the outer and middle toes are connected up to the first joint.

The hollow regions of the eyes, and the space between them and the beak, are velvet black; the top of the head, nape, back, shoulders, and the upper tail-coverts are deep black, with steel blue reflections. The wings and tail dull-black, with bronze-green-coloured reflections on the smaller feathers, and the three latter short quill-feathers have generally a narrow white edge near the tip; the edge of the wing is dusky and white, scalloped or scaled, the under wing-coverts brownish-grey, or pale-grey. The rump and all the under parts are white, although some few specimens have grey shafts to the under tail-coverts, or two black spots on the tips of the feathers. The under parts of the wings and tail are glossy blackish-grey, and the shafts of the larger feathers greyish-white.

There is hardly any difference in the outward appearance of the sexes; in some instances the male is a little larger than the female, his feathers are more glossy on the upper parts, and the white on all the under parts is more pure; but these differences are so very little that the question cannot be decided but by dissection.

The young Martins of the first summer much resemble the adult birds, but the upper feathering is paler, the gloss on the head is wanting, the tertials are distinctly bordered with white, the chin and throat, the rump and under parts are also frequently tinged with red, or spotted with grey; the lower part of the beak is dirty flesh-coloured, the corners of the mouth and eyelids, yellow, and the feet are very thinly feathered with down.

The young male and female are perfectly alike.

Varieties of this species are not uncommon ; the white are the most beautiful, with red or amber-coloured iris ; some are pied, with white wings and tail, or white heads. The variety in which all the black is dirty or brownish white, and the remainder, as usual, pure white, is very handsome, but must not be mistaken for the bird of the same name (*H. U. pallida*) of Latham and Bechstein, which differs in many respects.

The Martin is distributed over all the countries inhabited by the swallow, and goes further north even than that species. During the summer this bird frequents our country, arriving as soon as the spring is sufficiently advanced, towards the end of April or beginning of May, and generally after the swallows have made their appearance. A few forerunners are, by chance, seen earlier, but the great flocks do not generally come before the month of May. Their departure commences usually in September, and takes place a few days before that of the swallows ; they fly, it is said, by night, and travel in flocks at a great height. These birds are remarked to congregate in large numbers together some days before they take their departure ; and, after settling on some raised object early in the morning, and basking in the sun, they start off repeatedly as if by a given signal, and return again and again with great clamouring ; it almost seems as if they practise their mode of travelling, and train themselves for their journey. During these manœuvres, they mount quickly to a great height, and the same minute descend again with such velocity that the noise occasioned by their wings may be heard very plainly. It has been said that Martins prefer towns to country places, but we cannot agree in that supposition, as there must be more insects in the sweet air of the country than in smoky towns.

The flight of the Martin is not so quick as that of the



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PLATE XXXVI.

SWIFT.

CYPSELUS MURARIUS. (*Mihi.*)

THE SWIFT inhabits the greater part of Europe, from north to south, Asia, Africa as far as the Cape, and is not uncommon in North America. The most northern latitudes are not frequented by this bird. With us it is a summer visitant, arriving in May and departing in August. In performing their migrations their flight is generally very high, and they travel in companies; they arrive as it were all in one night for their summer sojourn, and depart as suddenly in autumn; but a careful observer may detect their restless behaviour some days before they depart, and their chattering may also be heard louder when going to roost. During the winter the Swifts reside in very warm climates, but never in a hiding-place in Britain or the like unfriendly atmosphere, nor remain in any part of Europe.

The favourite haunts of the Swifts are towns, where there are lofty buildings, old fortresses or castles, church-steeple, &c.; and where such buildings or lofty trees do not exist, the number of Swifts is comparatively limited. For instance, in the immediate neighbourhood of Windsor Castle and Hampton Court Palace these birds abound to a much greater degree than in many other parts of the river Thames. Swifts pursue their insect food very frequently for hours over the

surface of the water even after dark. When satisfied, they return to their hiding-places in a hole in a rock or tree, or in the brickwork of an elevated building. Early in the morning they are again on the wing in pursuit of their daily food. The character of this bird is very restless, wild, and quarrelsome, as may be heard at night by their continual disputes in the air. At the breeding season also they always contest for the nest or hole, attack each other furiously, and sometimes fall together to the ground. These birds are, at the same time, hardly ever found nestling in a solitary place, but always, where others of its species breed, in neighbouring holes.

The power of flight in this species is very considerable, and greatly exceeds that of the swallow. They are all day incessantly on the wing, and fly at a wonderful speed; their appearance is very conspicuous, in consequence of their broad heads, long hinder parts, and wonderfully long and pointed wings, which almost form a semicircle when expanded. Their flight is also very beautiful, as they seem to sail on the air, with hardly any flapping of the wings, and thus wheeling in large circles, mounting higher and higher, so as to become lost to the eye. When they fly low, they flap their wings in quick succession, and with vibrating motion. It is hardly credible that after so much and continued exertion, so little sleep or rest can suffice the Swift, as it actually enjoys, but it is nevertheless the fact.

Strong as the Swifts seem in point of exertion, they are unable to endure cold or wet weather, which, if it lasts for some days, soon after the arrival of these birds, they become weak, and actually fall to the ground and die.

Its legs are neither fit for perching nor walking; the first is consequently reduced to an uncomfortable leaning, and the second a miserable crawl, which he only exhibits in his high and lofty lodgings; but for the purpose of hang-

ing or clambering on perpendicular rocks or walls, &c., his short feet and four front or forward directed toes and hooked nails are exquisitely adapted; they enable him not only to remain in such a position for a length of time but even to sleep thus.

The call-note of the Swift is of two syllables, which can better be imagined than described, when we compare it with the filing or sharpening of a saw.

In consequence of the impossibility of this bird ever being able to enjoy a perch in a cage, it is very unlikely to become long an inhabitant of one.

The food of the Swift consists in all sorts of flies, beetles, butterflies, &c. &c., which he takes on the wing, and of which he consumes great numbers.

The undigested remains of the food which he swallows, are ejected by him in long pellets.

The breeding-places chosen by the Swifts are, as aforesaid, holes in lofty buildings, trees, rocks, &c., and these are furnished by both the male and female with straw, hay, threads, rags, dead leaves, feathers, &c., which the wind carries in the air, and which have been caught by them and carried to their home; these different materials are placed together and glued as it were with their sticky saliva, giving them an appearance as if snails had crawled over them, and covered them with their slime. It is hardly correct to give this irregular heap the name of a nest, as the surface is scarcely large enough to prevent the eggs from rolling off, and the young cannot find in it any warmth or softness. The female deposits two or three eggs, of the form and colour represented in our plate, No. 36, on which she sits for sixteen or seventeen days, during which time the male supplies her with food. The young remain long in the nest until quite fledged, and able to provide for themselves.

These birds often appear highly excited, probably before

surface of the water even after dark. When satisfied, they return to their hiding-places in a hole in a rock or tree, or in the brickwork of an elevated building. Early in the morning they are again on the wing in pursuit of their daily food. The character of this bird is very restless, wild, and quarrelsome, as may be heard at night by their continual disputes in the air. At the breeding season also they always contest for the nest or hole, attack each other furiously, and sometimes fall together to the ground. These birds are, at the same time, hardly ever found nestling in a solitary place, but always, where others of its species breed, in neighbouring holes.

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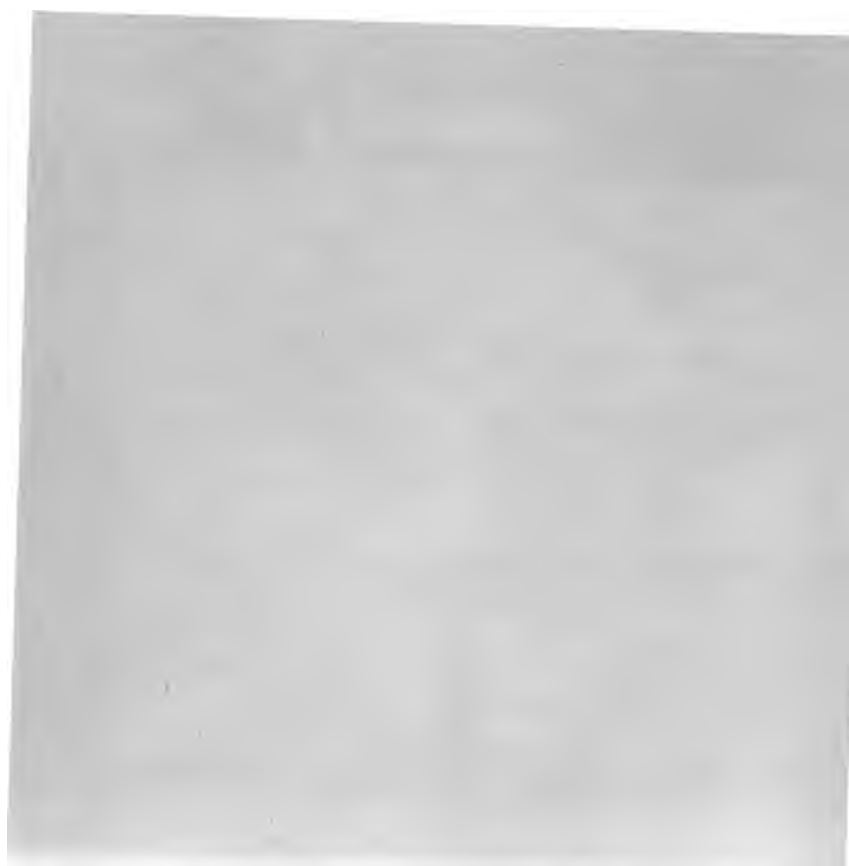
The undigested remains of the food which he swallows, are ejected by him in long pellets.

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These birds often appear highly excited, probably before

some atmospheric change, and, at such times, fly about with tumultuous and passionate eagerness, repeating their peculiar note. It appears probable that all the swallow tribe pair for life, as we may judge by their returning annually to the nest of former years, but the Swifts seem peculiarly attached to one another and are constantly seen to fly in couples. They are very irregular in their appearance, being some years seen in considerable numbers, and again become so scarce in the same locality, that hardly two pairs are seen together on the wing. More or less favourable seasons are probably the cause of these variations, especially, as before said, considering their great susceptibility of every atmospheric change. The entire length of the Swift is eight inches six lines, the wing from the carpus to the tip eight inches; the expanse from wing to wing, fifteen. The beak, from the tip to the gape, seven-eighths of an inch, and six-eighths from corner to corner of the mouth. Feet of four toes, all directed forward, the innermost, which is the smallest, reversible; the claws ivory-black, strong, and very sharp, the two middle ones three lines and a quarter in length. Tarsi very strong, seven lines in length, feathered on the upper surface, bare beneath, with a whitish-mealy skin; toes covered with a blackish skin, and two or three soft scales near the claws. The second quill-feather the largest, the first a little longer than the third; the chin pearl-white, marked down the centre of the feathers with dusky; the rest of the upper and under plumage, including the tail and tail-coverts sooty-brown, with brilliant reflections of pale yellow, green, and purple; wings and wing-coverts sepia, tinged with purple; tail forked.









INSESSORES.
FISSIROSTRES.

HIRUNDINIDÆ.

PLATE XXXVII.

ALPINE SWIFT.

CYPSELUS ALPINUS.

WE have the authority of naturalists of the present day to include the Alpine Swift among British birds, as it has been met with in three or four instances in this country ; and our drawing, although not made from a British killed specimen, is the representation of a very handsome bird that was obligingly lent to us for the use of our work.

The winter retreat of the Alpine Swift is in the warmer climates of the globe, particularly Africa ; during summer it visits the south of Europe, frequenting chiefly elevated parts, such as the rock of Gibraltar, the island of Malta, and some spots on the coast of the Mediterranean ; inland, the southern Alps are its chief haunts during that period. Switzerland, Savoy, and the Tyrol, are, it seems, the most northern parts of Europe in which these birds are found in numbers, although a few penetrate still further. Under what circumstances the Alpine Swift has found its way to our shores, where it can only be looked upon as a very rare straggler, it is not difficult to imagine ; probably a continuance of unusually warm weather has induced them to follow, as we have suggested in a former instance, a swarm of insects that were carried by some current of air before them.

The food of the Alpine Swift consists of insects which enliven the higher strata of our atmosphere, and which they take upon the wing as long as daylight lasts; as evening draws in they take a lower flight, in order to feed upon beetles, moths, and other night-flying insects. Their long and powerful wings not only help to sustain these birds with the greatest ease in the air, but their peculiar construction enables them to cut, as it were, through the currents of air which they must most naturally meet with during their flights, particularly among the chasms of rocks where the gales are of the most formidable description.

When the atmosphere is moist and cold, and there are no insects in the upper air sufficient for the support of these birds, they may, under such circumstances, be seen skimming in hurried flight over swamps, lakes, and ponds. Their flight is exceedingly quick and boisterous, and in their nature they are restless and turbulent, and very unsociable, except with their own families. It is very remarkable, that although these creatures are all day on the wing, their untiring energy should enable them to keep up their gambols until late at night, when they may be heard quarrelling together, and rushing through the valleys and along the streets of towns in pursuit of one another, for hours after it is dark; yet so little rest appears to suffice these birds, that among the earliest risers this Swift is usually the first. It seems as if the construction of the Swift is such as to enable it to float on the air in the same manner as the fish supports itself in the water.

The Alpine Swifts are seldom seen to alight upon the ground, and when they do so, the construction of their legs and feet not being adapted for walking and perching, they shuffle along and look very awkward, and the great length of their wings renders it very difficult for them to rise again. But when desiring to retain themselves in a hanging position,

against a wall or perpendicular rock, they exhibit great facility in preserving their equilibrium. By means of their strong claws, they cling firmly on ; and their tails serve them as a rudder or a rest, wherewith they balance themselves so as to be enabled to move the upper part of their body in any direction they may require. The position of the bird represented in our plate has been chosen for the purpose of elucidation.

In constructing their nests the Alpine Swifts make use of their power of clinging in the manner described, in order to place their nests in situations inaccessible to interruption. They choose for their breeding-places cracks and fissures in rocks, and holes in walls of lofty construction ; and soon after their arrival in Europe either resort to an old habitation of their own, or select a new one, and begin to prepare the nest, which is composed of dried grass, straw, dead leaves, wool, and feathers, all heaped on one another without order or arrangement ; and the whole is said to be glued together by means of saliva from the bird's mouth, which dries very fast, and gives it the appearance of having been varnished.

Towards the end of May, the female lays two or three singularly-shaped eggs, much resembling those of the Common Swift, but larger, which are hatched after fourteen days incubation. The young, when able to fly, follow the parent birds, but continue for some time to receive food from them on the wing. Towards the end of August, young and old take their departure together, and disappear generally all in one night. Where these birds are plentiful they are caught for the table, their flesh being considered very excellent.

Their call-note is *skree, skree!* and resembles that of the Common Swift, but is more musical, and almost as strong as the cry of the kestrel.

The measurements of the Alpine Swift are as follows :

length, from the beak to the end of the tail, about eight inches and a half; and from the beak to the extremity of the wings ten inches. Wing, from the carpus to the tip, eight inches and seven-eighths. The beak measures four lines from the forehead to the tip, and full ten lines from the tip to the gape.

The entire plumage of this bird is dusky, with exception of the chin, throat, and belly; the dusky band which crosses the breast is rather deeper in colour than the rest of the plumage, and the forehead and top of the head are tinged with grey. The whole feathering of the bird is of a very silky texture. The beak is black; the iris dusky.

In this species, as in the Common Swift, the principal length of the wing consists in the prolongation of the primary quill-feathers, which, together with the extreme shortness of the secondary and tertial feathers, gives that peculiarity of appearance which enables the most superficial observer to distinguish the Swift from all other birds when on the wing.

The outline head, fig. 37, is that of the Alpine Swift.

Figs. 36, represent the head of the Common Swift (*c. murarius*) in two points of view, all are of the natural size.



N. 38.

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FISSIROSTRES.

CAPRIMULGIDÆ.

PLATE XXXVIII.

NIGHTJAR.

CAPRIMULGUS EUROPEUS.

Among the collection of live specimens of British birds that we have kept for the purpose of becoming more acquainted with their peculiar habits, we have several times attempted to rear this species with varied success: one pair of these beautiful birds we brought up from the nest; we kept them until they were full-grown, and in their full feathering; but when the cold weather set in, the kitchen fireside and a covering of flannel were not enough for them to thrive, the second and third frosty night putting an end to their existence.

Raw meat chopped very fine was their food, but they did not help themselves, and would not have lived so long if we had not paid great attention to their regular meals night and morning. During the whole day they sat or rather lay in a corner of their cage like an inanimate thing, although their splendid large eyes were wide open. The nestlings were brought by a lad upon whose testimony we could rely, who said they had been found on the ground among long grass, moss, and fern. Besides having had these birds alive in confinement, we had very frequently the pleasure of watching them in the open air in a wild state, in the uninclosed part of Claremont, among the different sorts

of trees that grow in patches in that locality, consisting of oak, birch, and fir trees, scattered over heathy ground. We frequently went towards dusk in the months of June and July to enjoy the sight of their gambols and the music of their monotonous tune.

Their flight is more like that of a moth than of a bird, noiseless, except when they betray themselves by beating their wings together twice at a time and snapping with their beaks; the males have also a peculiar call-note, which they utter when perched in a tree. This whizzing call, which can only be described in the words *arcrrrrrrr*, *ærrrrrrr*! and which is kept up for several minutes at a time, is by no means a guide by which their situation can be known, as they are enabled to modulate it at pleasure, and the nearer one comes to them, the further off the sound sometimes seems to be; they damp its utterance, by which method they deceive an unaccustomed ear very easily. Immediately before starting off from where they are perched, they stop their note short, and a moment after are on the wing, uttering the word *deck, deck*! apparently scared away.

We were listening one evening to the various calls uttered by these birds in a place replete with echoes, and were agreeably surprised to hear these sounds repeated by them at different distances; we imagined at first that the several calls proceeded from as many different birds, until the perfect regularity of the repetitions led us to detect the cause.

When in pursuit of their prey, which chiefly consists in moths and other nocturnal insects, we have seen them fly round and round a bush as a moth does round the flame of a candle, or like the swallows in sweeping rounds high and low, and falling over in the manner of tumbler pigeons, or rolling in the air like a ship at sea, or a kite

in a changing wind. It is beautiful, indeed, to watch these birds, and easy to approach them very nearly, as they seem to take hardly any notice of an observer; and where they have a brood, the pair will fly so close, that the wind produced by the movement of their wings may be plainly felt.

The noiseless flight of owls is generally attributed, not only to the softness of their plumage, but to the serrated edges of the outer quill-feathers; the same observation may apply to the Nightjar, whose feathers are equally soft, and on being closely examined, show, on the first quill-feather, the same property in a slight degree.

About the middle of May these birds are paired, and without building a nest, the female deposits her two eggs, like the one represented in our plate, No. 38, on the bare ground by the side of an old stem or bush; heathy, dry, sandy, and hilly ground, and spots covered with fern, are the places the most likely to harbour the Nightjar.

Young birds, before they have any feathers about them, are covered with dark grey down on the upper parts, and pale on the under. Their first appearance is very extraordinary.

The use this bird is of to the cultivator of the soil is very considerable, in consequence of their destroying immense numbers of insects of the larger kind, such as cockchafers and large moths, the caterpillars of which are very injurious to forest and fruit-trees. The Nightjar belongs also to the dainties, provided one is able to take them about the time that these birds are on the move for their winter quarters; they are as fat as the land-rail and quail at that period.

The geographical range of the bird under present consideration is very extensive, being found in Europe, Asia, and Africa. In Europe it is found as far north as Norway,

during the transient summer of that climate, and is well known in all the middle and southern parts; in Africa, it is equally common, and in Asia as far as the East Indies.

The constitution of this bird is very delicate, being unable to bear the cold or wet.

The common specific name of *Europæus* indicates that it is the only one of its kind that is found in Europe, but there are several species that resemble it much, differing, however, very considerably in size and other respects, to be found in other parts of the globe. The bird that visits us during the summer months, retires to warmer climates for the winter, and takes its departure towards the end of September.

The entire length of the Nightjar is ten inches; from the carpus to the end of the wing seven inches and a quarter; the tail measures five inches and a half; the beak, to the feathers on the forehead, four lines, and to the gape an inch and a quarter; the upper mandible has an emargination or tooth on each side of the hooked tip. The nostrils are of a peculiar construction, consisting in tubes, similar in appearance to the nasal tubes of the petrel tribe; these, in the Nightjar, are fleshy, and capable of expansion and contraction. The vibrissæ, or bristles that fringe the upper mandible, are inserted deeply beneath the skin, and, being furnished with strong muscles, are capable of being moved forwards or sideways, and are supposed to assist in the capture or retention of their prey: these bristles are eight or nine in number, very strong at the root, and drawn gradually to an extremely fine point; in substance, they resemble whalebone.

An outline of the skeleton head of this bird is subjoined, to show the number and position of the vibrissæ; it is represented of the natural size (see fig. 38).

The legs and toes are small in proportion to the size of the bird; the tarsus measures nine lines, is feathered on the

front or upper side, and naked behind, showing the reticulated skin. The middle toe measures nine lines, and is connected with the outer and inner ones by webs reaching as far as the first joint; the outer and inner toes measure five lines; the hinder, which is reversible, not more than three. The nail of the middle toe, which is much longer than the rest, is furnished on the inner edge with a beautiful little comb, of the use of which various opinions have been given; we incline to the supposition that it is applied to the purpose of dressing the before-mentioned vibrissæ, as it appears from its structure more calculated for the service of the toilet than as a means of capturing or retaining their prey.

The plumage of the Nightjar is remarkably soft and silky, but the shafts of all the feathers, especially those of the wing and tail, are strong and firm. The tail, consisting of ten feathers, is nearly even at the end, and the feathers measure five and a half inches. The principal colours of the plumage are ochre, orange, brown, and grey, beautifully pencilled upon rich dark brown. The feathers of the head, nape, back, and scapulars are marked down the shafts of the feathers with a stripe of deep velvet black. The eyes are encircled with hairy feathers, mottled with orange and black; the same colours prevail upon the chin and throat, and extend backwards round the neck, forming a kind of collar. Along the lower mandible a white stripe passes to the back of the ear-coverts, and there is a white spot on each side of the throat.

The male is principally distinguished from the female in colouring by white spots, which occupy an inch of the tip of the two outer feathers of the tail, and a small portion of the inner web of the three first quill-feathers of the wing. In both sexes the under plumage is barred with orange, brown, and dusky transverse lines. The large and beautiful

eyes are very dark in colour, and the eyelids black. The tip of the beak is dark horn-colour; the inside of the mouth pale flesh-red. The feet are yellowish-brown.

The skeleton head, figure 38, is that of the Nightjar, and is represented the size of nature. The egg of this species is figured No. 38.



16. 39.

but we believe that a careful comparison of it with a living bird would show that we have not overrated its splendour.

The Kingfisher is a well-known inhabitant of all the milder climates of Europe, wherever there is fresh water abounding with small fry, such as minnows, bleak, dace, small gudgeons, &c. In England, this species is indigenous, and may be met with at all times of the year, both in warm weather and during the severest frosts. It appears attached to particular localities, which it never deserts unless driven by want during a severe winter to seek for the more open springs that are usually to be found by the sea-side.

The Kingfisher is a solitary and unsociable bird, and will not permit the approach of an intruder of its own species within the haunts of its customary range or hunting-ground, but chases any that invade its privacy until driven from the spot; it is only on such occasions, or during the pairing season, that two of these birds can be seen flying together.

The favourite haunt of the Kingfisher is on the banks of a river, lake, or running stream, which is supplied with branches that overhang the water in such a manner as to enable the bird to sit and wait in that position for its prey to come within its sight and reach.

It is exceedingly interesting to watch the Kingfisher in the act of taking its prey. When on the watch for food, perched either on the branch of a tree, a stump, a post, or railing by the water-side, it may be seen from time to time plunging into the water, and almost instantaneously rising again with its beak foremost, holding between its mandibles a small fish, with which it returns to its former perch for the purpose of consuming it. This it effects by swallowing the fish entire with the head foremost, after having crushed and pinched it to death. When this is achieved, the bird returns again and again to the attack until satisfied.

We have also frequently seen this bird stationary on the

INSESSORES.
FISSIROSTRES.

HALCYONIDÆ.

PLATE XXXIX.

KINGFISHER.

ALCEDO ISPIDA. (*Linn.*)

THE figure of this beautiful bird was taken from a living specimen that we had for some time in confinement, which was accustomed to feed itself with minnows and other small fish from a stone jar that stood on the table, and this feat was repeated many times in the day.

The Kingfisher surpasses all other British birds in the brilliancy and changeableness of its colouring, which varies with every change of position, from the most brilliant torquoise-blue to the warmest green in the lighter parts of its plumage, and in the darker reflecting copper and gold. In our plate we have chosen the blue appearance, as the most beautiful, and the one most frequently to be seen in its living state when on the wing, as it shoots across the observer's path like a bright stream of phosphoric light. In its green livery it is seldom seen in a wild state, unless when the light of the sun is reflected strongly from it, on account of its assimilation with the surrounding herbage. When dead, and preserved for a cabinet, its plumage has a dull blueish or muddy-green appearance, and the brilliant tints of life have vanished. In colouring this bird from the life, both in this and in the quarto edition, we have drawn upon ourselves the imputation of over-colouring our plate,

wing, hovering over the water where there was a quantity of small fish, and plunging into the stream in the manner before described. They skim along the surface of the water at times chiefly towards the evening, which may be in search of water-insects for their young family, as they do so more during the summer months than at any other time.

About the middle of May the Kingfisher begins to seek a mate ; as soon as his choice is made, the birds begin to dig a hole in a sand-bank about two inches in diameter, and sufficiently deep to prevent a man's arm reaching to the extremity ; near the end of this excavation the female deposits five or six eggs. The young birds are fed with insects and half digested fish until they are strong enough to share the fare of the family.

The Kingfisher, when flying along the surface of the water, may frequently be heard to utter a shrill piping call, which, although louder, much resembles that of the summer snipe.

The entire length of this bird is seven inches ; the wing, from the carpus to the tip, measures three inches ; the tail one inch and three quarters ; the beak is an inch and a half long from the forehead to the tip, and two inches from the tip to the gape. The tarsus measures three lines, the middle toe and claw nine lines, the inner and hinder toes alike four and a half lines ; the claws are much arched and very sharp. The feet are formed for grasping like the human hand. The eyes, which are large for the size of the bird, are oval as well as the pupil, and directed forward doubtlessly for the purpose of aiding the bird to discern its food in the liquid element.

The forehead, top of the head, nape, tippet, and wing, coverts are rich reflecting greenish blue, which colour is continued on the outer webs of the quill-feathers, secondaries, and scapulars ; from the base of the under mandible

the same colour is continued along the sides of the neck. The tip of each of the feathers upon the head and wing-coverts has a metallic blue spot on the extremity of the shaft, which adds to the splendour of the feathering.

The chin and throat are pure white, and a band of the same colour extends backwards from the ear towards the nape of the neck. Between the upper mandible and the eye is a rich chestnut spot, continued below the eye as far as the ear; this chestnut band is interrupted by a small white spot before the eye, and a line of small close-set bristles, round from the nostril below the eyelid as far as the lore behind the eye. The corner of the mouth on the under mandible is bright red lead, and the short broad tongue is of the same colour. The breast and all the under parts, including the under tail-coverts, are orange chestnut. The back, rump, and upper tail-coverts are perfect mineral blue, which changes colour according to the light. The tail feathers are Prussian-blue with dusky shafts. The shafts and all the inner webs of the quill-feathers being dusky with paler edges, give rise to the supposition of their having copper or gold tints reflected.

The outlines figured 39, represent the head and foot of the Kingfisher in the natural size. The egg No. 39, also belongs to this species.



38.



39.



42.



43.



44.







ORDER. INSESSORES.

DENTIROSTRES.

THE members of this division of the Inessores, or perching birds, are distinguished by an emargination of one or both mandibles, near the tip of the bill, answering to the tooth or festoon, that is to be observed, more or less, among the different divisions of the Raptores : this emargination, although in few sufficiently developed as to serve the purpose of tearing in pieces their prey, enables them to hold it with firmness and security. This is more distinctly prominent in the *Laniada* than in any other families of the tribe, and the habits of the shrikes, and the food sought by them, bear, consequently, more analogy to those of the Raptorial order.

The bill, in some of the Dentirostres, is lengthened, so as to defend the face from being injured by the struggles of their prey ; in others, where the bill is short and broad, stiff bristles or hairs answer equally the purpose of defence. Five natural families are included in this tribe, as spoken of by Selby, to whom we are indebted for the substance of the above remarks, as well as for the generic characters mentioned below, under the names of *Todida* or *Muscicapida*, *Laniada*, *Merulida*, *Sylviada*, and *Ampelida*. The food of this tribe is various ; that of the two first consisting almost exclusively of insects and animal matter ; that of the two next comprises insects, fruits, and berries ; while in the *Ampelida*, which are, with the exception of one species, inhabitants of the New World, vegetable productions form the chief nutriment.

In the first of these families the bill is broad, emarginated, and depressed at the base, which is beset with projecting bristles; the legs are short and weak, the feet calculated for perching. Their food consists of insects. Of the various forms contained in this family, we only possess representatives of a single group, the *Muscicapa* of authors, of which the following are generic characters:—

“Bill rather short, sub-triangular, depressed at the base, strong, and compressed towards the tip, which is deflected, and with both mandibles emarginated. Base of the bill beset with long stiff bristles. Nostrils basal, oval, and lateral, partly concealed by the feathers at the base of the bill. Feet having the tarsus as long as, or rather longer than the middle toe; toes, three before and one behind, the side ones of equal length, the outer one joined at its base to the middle toe. Wings, having the first quill very short, the second shorter than the third and fourth, which are the longest in each wing.”—SELBY.

INSESSORES.
DENTIROSTRES.

MUSCICAPIDÆ.

PLATE XL.

SPOTTED FLY-CATCHER.

MUSCICAPA GRISOLA. (*Linn.*)

OF the *Muscicapidæ* two species only are at present recognized as visiting Britain, the Spotted Fly-catcher and the Pied. Some few other species of the same genus visit





other parts of Europe during summer only, and retire to warmer regions for their winter retreat. They are entirely confined to the Old World; other divisions of the *Dentirostres* filling their place in the new.

The Spotted Fly-catcher is readily distinguished from other little birds by its peculiar manners, and, when once pointed out, cannot be again mistaken. It sits, when on the watch for food, in the outer spray of a tree, or more commonly on a wall, or on the top of the palings of a park, and every now and then descends from its station upon a passing insect, and then regains its former place; if followed, it flits along before its pursuer, alighting again and again on the wall or palings a little way in advance of him, and often admitting of a very near approach.

It is one of the least shy of our summer birds, and builds commonly in gardens, in situations similar to those chosen by the redbreast, and on the walls of houses where fruit-trees, or other climbing shrubs, are trained, placing its mossy nest in an angle formed by the branches.

Fly-catchers are said to rear but one brood in the year, which is very probably the truth, as their arrival in England is later than that of most summer migrants; but we have known an instance, where the first nest and eggs had been taken away, of a second and a third being placed in the same locality, where a brick had been displaced in an old wall. They are believed, also, to return to the same spot for incubation year after year, provided the locality is a permanent one, such as the place just mentioned. The Spotted Fly-catcher, although the most silent of our summer visitors, is not one of the least interesting. It makes its appearance in England the middle or latter part of May, and young broods are fledged about the middle of the succeeding month. Three young Fly-catchers were brought us, which had been taken from a nest in an adjoining gar-

den; we placed them in a large cage, in which were several other little birds of different species; their entrance was immediately hailed with great delight by a robin, who, with many lively attitudes and gestures, uttered frequently his note of surprise *crackrrrack*! The little Fly-catchers, which were still in the plumage of young nestlings, namely, mottled with grey, white, and brown, and tail-less, mounted themselves on one of the uppermost perches, where they sat quietly side by side.

After they had been some time in the cage, a sudden stir was observed among them, and a bird hastily entered the window near which the cage was placed, alighted upon it, and as hastily retreated. In the course of a few minutes this was repeated, and it proved to be one of the parent birds, whose affection had traced the little ones to their place of imprisonment, and who was now supplying them with food. We were highly delighted at this circumstance, as it promised a supply of proper food for the nestlings, such as we could not ourselves have provided. We had now only to take the precaution of having the window constantly open during the day to admit the visits of this interesting little creature, who continued, day after day, to supply the young ones with food, notwithstanding the interruptions that might be supposed to be caused by a large family passing continually in and out, as the cage stood in the drawing-room.

Apparently, the task of feeding the nestlings was performed by one alone, probably the female, as only one bird entered the room, while her mate, who accompanied her constantly in her flight, always waited for her outside the window, either upon the roof of the house or on a neighbouring tree. The young ones usually appeared aware of the approach of the parent, and were on the alert, and eager to receive the expected food, some seconds before the appear-

ance of the bird, although we could perceive no sound that acquainted us of her approach.

As before-mentioned, the little nestlings sat upon an upper perch, but were not always near enough to the wires of the cage to be within reach of the parent when she appeared with food, which circumstance afforded an opportunity for a display of sagacity on the part of the robin before-mentioned, which we could not have credited if we had not seen it.

This little creature, who had for some time been an inhabitant of the cage, where he lived in perfect harmony with all his associates, had from the first shown great interest in the little Fly-catchers, and now, perceiving that the nestlings could not reach the offered food, but sat with their wings fluttering, and their mouths open, anxious to obtain it, flew to the wires, received the insects from the mother bird, and put them into the open mouths of the nestlings. This curious action was witnessed by ourselves and several friends, and occurred not once only, but was repeated every succeeding day, as often as his services were required; he seemed as watchful for the return of the parent Fly-catcher as the little ones themselves, and always ready to act the part of carrier when necessary, but when he saw that his assistance was not wanted he quietly looked on.

The food brought by the Fly-catcher consisted generally, as far as we could judge, of honey-bees, living, struggling bees; sometimes two or three were brought at once, and transferred, still alive and struggling, to the mouths of the little ones, by whom they were eagerly swallowed. On two or three occasions the robin was observed, on receiving the bee from the Fly-catcher, to pause with it in his beak, as if in a fit of absence, and then to swallow it himself, but, to his honour be it spoken, this was not observed to take place more than two

or three times, whereas, his transference of the insect from the parent to the little ones was witnessed hundreds of times.

The young Fly-catchers were never seen to make any attempt at feeding themselves, nor did the robin give them any of his own food, namely, the German paste or worms, with which the cage was constantly supplied; neither do we remember that the little birds were ever seen to drink from the water fountain. They usually remained upon a perch, side by side, and at night nestled close together, with the robin beside them.

For above six weeks the parent Fly-catchers continued to attend the little ones, from four or five o'clock in the morning, at which time the window was purposely opened, until nearly dark in the evening; and the redbreast also remained unremitting in his attention to them, until the accidental death of one of the little brood induced us to give the two others their liberty, fearing that, if we kept them longer they would not become sufficiently able to provide for themselves before the period of their migration, and so be left to perish.

It is a question of some curiosity, whether the bees with which this little family was fed were really honey-bees, as they appeared to be, and we afterwards regretted that we had not ascertained the fact, by intercepting one of them and examining it; that they were alive and entire there is no doubt, and that they were swallowed also in that state is certain. Our belief that they were really honey-bees is strengthened by the animosity of cottagers towards this little bird, which has universally the credit of visiting their bee stalls and purloining the bees from the door of the hive. Another corroborating circumstance in favour of their being honey-bees is, that Fly-catchers abound in places where lime-trees are numerous, which trees are much visited by those insects, as we have

observed, in some of the most wooded parts of Surrey, where the lime-tree and the Fly-catcher are equally abundant. In Surrey, also, the name of Bee-bird is commonly applied to this species.

The nest of the Spotted Flycatcher is far less remarkable for neatness of form and skilfulness of structure than those of many small birds, and must yield the precedence in these respects to the nests of the finches, the warblers, and even of the larks and pipits. In materials it most resembles the nest of the redbreast, although it is neither composed of so great a quantity of materials, nor are they so well put together. Green and grey moss, roots, straws, and dry grass, spider cots, etc., are the component parts, and so slightly arranged that the nest can hardly be removed from its resting-place without losing its form. The nest now before us, besides all the the materials mentioned, contains a few horse-hairs within, and without is interwoven with portions of the holly leaf, in a skeleton state.

The eggs of the Spotted Fly-catcher are usually five in number, mottled with reddish spots on a pale green ground; in some specimens the larger end is blotched with reddish grey. Some eggs of the Fly-catcher resemble greatly those of the redbreast, but are mostly smaller in size, and the markings are less regularly disposed.

Young Fly-catchers, before they leave the nest, are on the upper plumage greyish-brown, mottled with yellowish-white spots; beneath whitish, and their broad beaks are very conspicuous. When further advanced in plumage, that is, after their autumnal moult, there is but little difference between them and the adult, as may be seen in our plate, in which the upper bird represents the adult, and the lower the young of the year, sketched in September. The young birds leave the nest before they are well able to fly, and may be seen sitting side by side upon a branch, receiving food from their

parents: we have seen a little family thus attended until dusk in the evening.

This species is said to be commonly met with all over England; we are disposed to think they chiefly abound in the more wooded parts, as their nests have been very often brought to us, when residing in a country of that description; but we have met with them far less frequently in situations where agriculture had deprived the surface of the earth of its more natural appearance of wood and heath, or where the nature of the country was barren and unsheltered. This is, perhaps, the cause of the Spotted Fly-catcher being more rare in Scotland than in Ireland. According to Temminck, this species is found in Sweden, and in Russia, in the temperate parts; it is also widely-diffused over other parts of Europe, as well as Africa.

In adult plumage the garb of the Spotted Fly-catcher is very simple and plain. The whole upper parts are hair-brown, inclining to grey; the quill and tail-feathers rather darker, as well as the tertials; these latter bordered with lighter brown. On the crown of the head the feathers have a dark brown spot along the shaft; the throat and centre of the belly are bluish-white; the flanks and under coverts of the wings tinged with yellowish-brown; the sides of the neck, breast, and flanks are streaked with hair-brown; the legs are short, and the feet small, and in colour bluish-black.

The young birds of the year differ little from the adult, except in the edges of the tertial feathers, which are rufous-brown, and spots of a similar colour occupy the tips of the larger wing-coverts. The beak is dusky, the base of the under mandible yellowish-brown, the inside and corners of the mouth yellow; the iris dusky.

The entire length of this bird is rather less than six inches; the wing measures three inches and a quarter; the tarsus seven lines, the middle toe and claw about as much.

There is no difference of plumage between the male and female, and the moult is said to take place but once in the year.

In form, the Spotted Fly-catcher is slender, and in its flight very light and buoyant.

The outline (fig. 40), represents the beak of the Spotted Fly-catcher of the natural size.

The egg No. 40 belongs to this species.

INSESSORES.
DENTIROSTRES.

MUSCICAPIDÆ.

PLATE XLI.

PIED FLY-CATCHER.

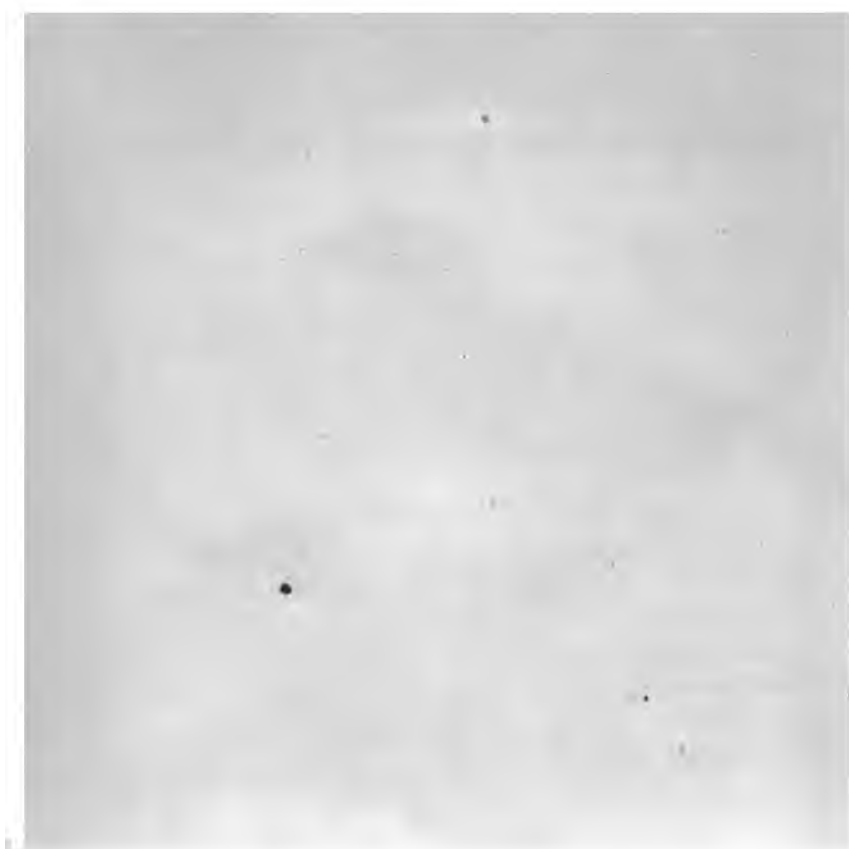
MUSCICAPA LUCTUOSA.

THE PIED FLY-CATCHER, called also the Coldfinch, by Bewick and Selby, is an occasional visitant in Britain in the summer months, and in winter returns to its warmer quarters, in Italy, and along the borders of the Mediterranean, where it is very abundant from October until March. The supposition that the Pied Fly-catcher was a permanent visitor here, but only very rarely met with, is unfounded. Bewick gives, as usual, a very correct and beautiful representation of the male bird, and it is to be regretted that he has not also figured the female of this species, since the descriptions given of it by different ornithologists do not agree in every respect. We figure, in our plate, the male bird in adult summer plumage, and above it a female of the same age.

This Fly-catcher moults twice a year, which causes some difference in the colours of its plumage; and, as there are other species which bear much resemblance to it, care should be taken to consider the season when a specimen is obtained, although the measurement of the wings will at any period decide the question; the wings of our Pied Fly-catcher being shorter, by half an inch, than those of the *M. albi-collis*, a species nearly allied, and equally abundant on the Continent.



Pl. 41.



We consider it not improbable that the *M. albicollis* will, sooner or later, be met with in Britain, as, according to Temminck, that species is the most common in France: The present distinction given may enable our fellow countrymen to judge, at a glance, to which any specimen belongs. When the wings of the *M. Luctuosa*, or Pied Fly-catcher, are closed, they cover about one-third of the tail; but in the *M. albicollis* the wings, when closed, cover two-thirds of it.

The entire length of the Pied Fly-catcher is five inches and a half, and about nine inches and a half in expanse. The beak measures four lines and a half, is broad at the base, and slightly arched towards the tip; the nostrils are round, open, and covered with bristling feathers; and the corners of the mouth are fringed with strong black bristles. The iris is dusky, or dark-brown. The legs are slender and black in old birds, in young ones brownish slate-coloured. The tarsus measures eight lines, the middle toe, including the nail, seven lines and a half; the hinder toe and claw five and a half.

The adult male, in spring plumage, is as follows:—On the forehead are two connected round white spots, and all the under parts, from the chin to the under tail-coverts inclusive, are pure white; the top of the head, cheeks, back, shoulders, and upper tail-coverts are jet black; the nape of the neck, and rump, greyish-black; the lesser wing-coverts and primary quill-feathers are dusky; the latter quill-feathers, as also the secondaries, have a little white towards their roots, which are nevertheless entirely covered by the wing-coverts. On the first of the tertials this white extends further, and the three latter are entirely white, with a black spot on their tips, which is only partially on the inner webs. Directly above these feathers, namely, the tertials, the larger wing-coverts, have one web of their tips white, which, toge-

ther with the before-mentioned, forms a large white space or spot on the wing. The tail is black; the outer tail-feathers have white outer webs, which colour extends over the inner web towards the root of the feather, but becomes lost on the outer edge before it reaches the tip of the feather.

The young male has the spot on the forehead smaller; the wings have less white, but the tail more, as the second and third side-feathers have a white edge to the basal half of the feathers; the upper plumage is slate-coloured.

In the month of July these birds begin to moult, and by the end of August they wear their perfect autumn plumage. If specimens are obtained during the moult, the black feathers and the new grey ones are prettily intermixed.

The adult male, in autumn or winter feathering, has the wings and tail as in spring, but all the upper plumage is slate-coloured instead of black; all the under parts are white, but tinged with yellowish-brown on the sides; the forehead is dull white, and the cheeks dark ash-brown, spotted with white.

The second moult takes place during their absence in warmer climes, late in the spring. This does not extend to the quill-feathers and tail. Sometimes specimens that arrive in May have not fully completed their moult, and the greater number hardly wear their perfect spring plumage, or, as it is termed, their bridal garments, one month before they begin to moult again. Thus, the differences occasioned by age and sex in this species have given rise to them any varying descriptions of different ornithologists.

The plumage of the adult female in spring resembles much that of the young male, and can only be distinguished by having less white on the wings. The brownish ash-colour of the upper plumage is always somewhat paler or browner, and the under parts dirty white, and tinged on the throat

and upper part of the breast with brownish-yellow. When they attain old age their plumage darkens more on the upper parts, and the forehead becomes dirty white.

The young birds of the year are principally known by their smaller size, and their plumage is of the following description: The base of the beak and soles of the feet are reddish-ash; throat, and fore-part of the neck, yellowish-white; from the lower corner of the beak descends a faded greyish or dusky streak along the sides of the neck. The middle of the breast, the belly, and under tail-coverts, are white; the chest dirty yellowish, and the sides tinged with yellowish-grey; the thighs are spotted with grey; the cheeks and forehead are dirty pale brown; all the upper parts brownish-ash, strongly tinged with brown on the top of the head, shoulders, and back; the lesser wing-coverts are like the back, the larger dusky, edged with brownish-ash, and dull white tips; the tertials are of the same colouring, but without white tips; the three last are edged with dull white, and have a spot of the same near the root; the tail, including the latter upper coverts, black, dusky on the sides; the outer feather white on the outer web, and the same extending to the root for half its length on the inner web; the second feather has a white edge for half its length from the root, and the third frequently an indication of white in the same place.

The young female birds vary very little from the young males; they are less clean on the under parts, browner on the upper, and have still less white on the wings.

The young birds of the year, before the first moult, resemble the young of the spotted Fly-catcher very much; but their smaller size, and other markings of the tail-feathers distinguish them plainly. They are brownish ash-coloured on the upper parts, sprinkled all over with dirty white drop-shaped spots; the breast spotted with brown; wings and tail as already described; the iris brownish-ash, but the

colour of the legs lighter, like those of the autumnal moult. Between the male and female there is no distinction at this period.

The Pied Fly-catcher is found over most parts of Europe, and is consequently a well-known species, although it is most abundant in the more southern parts, as Greece, Italy, the south of France, etc. ; more to the north, they are found only during the summer months, that period when the winged insects that constitute their food are abundant. The arrival of the males is generally found to precede that of the females by a few days, in countries where they are regular summer visitants.

The favourite haunt of this bird is woodland, in the neighbourhood of lakes and rivers, the chief localities where insects abound. During very hot and dry weather they resort to the tops of large trees, where they find insects swarming, and, unlike the preceding species, occasionally take them from off the leaves.

In spring and autumn they descend to smaller trees and shrubs, but are very rarely seen upon the ground. The Pied Fly-catcher is a scarce bird in England, and its appearance is chiefly confined to the counties of Cumberland and Westmoreland, and, according to Selby, the West Riding of Yorkshire ; in other parts it is rarely seen. It appears probable, that the few that visit England are but stragglers from the outskirts of the flights that annually migrate to and from the north of Europe.

The Pied Fly-catcher builds in holes in large trees, particularly in the oak, the beech, and the aspen. The nest is sometimes placed in the deserted hole of a titmouse or woodpecker, which is not wider than is sufficient to allow their bodies to pass through ; where the holes exceed this measure these birds are said to close them up with clay to the size required ; and the height chosen is never less than

six feet from the ground. Sometimes a nest is found placed on a broad branch close to the stem, or on broken stumps of trees; and, in such cases, they are not unsightly, nor carelessly put together, being built of moss and roots on the outside, and lined with feathers, wool, and hair. When the nest is placed in a hole, the construction is very inferior. The female deposits five or six bluish-green eggs. Incubation does not commence before June, and the young birds are hatched in about fourteen days, during which time the male often relieves the female in her task.

The egg No. 41 belongs to this species.

INSESSORES.
DENTIROSTRES.

LANIADÆ.

PLATE XLII.

ASH-COLOURED SHRIKE.

LANIUS EXCUBITOR. (*Linn.*)

THE Butcher-birds are by some authors ranged immediately after the birds of prey, with which some of their qualities ally them; by others, they are located among the insect-devouring tribes; others again, place them at the head of that section. It is an intricate and difficult question to determine which position is the most natural and proper, and one, besides, that would, if ascertained, hardly repay the labour of investigation.

Five species are recognized as belonging to Europe, of which three are periodical visitors with us; many others are found in other parts of the world, and all are distinguished by the courage and ferocity they exhibit in the capture and destruction of their prey, which is effected, not like the Raptores, by means of their claws, but by their beak. Small birds, reptiles, and insects, form their food; and their habit of hanging up on a thorn their prey when taken, and then dissecting and tearing it in pieces, is supposed to be the origin of their generic name.

The Laniadæ are connected with the tribes with which we find them arranged by Temminck, Selby, and other authors, by their agreeable song, by their insect food, by their manner of flight, and the kind of country they frequent.



Pl. 12.



They build their nests in woods and thickets ; their flight is irregular, and their tails incessantly in motion.

The plumage of the adult male differs from that of the female, and the moult in most of the species takes place but once in the year. Like the thrush, which resorts continually to the same sacrificial stone on which to immolate the devoted snail, the Shrike is said to return again and again to the same thorny bush for the purpose of transfixing his selected prey.

In the genus *Lanius* the bill is strong, straight at the base, compressed at the sides, the point strongly hooked and toothed ; base of the bill beset with strong hairs, directed forwards, partly covering the nostrils, which are basal, lateral, oval, and partly closed. The third and fourth feathers are the longest in the wing.

The Ash-coloured Shrike is the largest of its class that visits our country ; it measures full ten inches in length from the tip of the beak to the extremity of the tail, and fifteen inches in expanse ; its wings are very short in proportion to its tail, and, when closed, cover only one third of it. The beak measures in the arc three-fourths of an inch, and is black in colour ; the iris is dusky ; the tarsus measures one inch and a quarter, and the middle toe one inch, including the claw, the hinder three-fourths of an inch ; the soles of the feet are greyish, and the base of the upper and under mandibles bluish in the summer.

The throat, neck, breast, belly, and vent, are white. From the beak, through the eyes, runs a black band towards the ears, over which is one of pure white, from the forehead backwards, which becomes lost in the ash-colour of the head and nape. The forehead is dirty-white ; the crown of the head, neck, back, and rump, are ash-coloured, the tail-coverts a little paler ; this is also the case with the shoulder-feathers. The lesser and primary wing-coverts are black, the latter

tipped with white ; the primary quill-feathers are black towards the tip, with the basal half white ; the secondaries only white at the root, and black in the remaining part ; the tertials are black, with white tips. The two middle tail-feathers are black, with a purple gloss, the three next with white tips and roots ; the two outer feathers on each side entirely white. The female has all the colouring duller, particularly the breast, which is marked with pale, ash-coloured undulating bars ; the white tips on the wing-coverts and tertials are not so pure ; and it may here be remarked, that the white tips of the wing-feathers chiefly wear off before the autumnal moult. The very old female nearly resembles the adult male. The young birds are much like the female, but the forehead, back, and shoulders, are tinged with yellowish-brown, and bear, also, indications of waving lines, which are, however, closer together on the breast and sides than in the adult female. All the tips of the feathers are yellowish, and there is less white on the roots of the tail-feathers : the white on the tail is also less. The beak is grey with a black tip, and the corners of the mouth white ; the iris brownish-ash.

Very old birds have, in some specimens, an appearance of bars upon the black feathers of the tail, particularly when those feathers are new. A variety has been described whose feathers were entirely white, tinged with rich yellow. The moult of these birds takes place in autumn.

The Ash-coloured Shrike is an occasional winter visitant with us, and known in most parts of Europe and North America, with exception of the most northern parts. This Shrike is usually observed to visit us in spring or in autumn. We have seen a pair of these birds late in the autumn of 1837, in the neighbourhood of Ember Court, in Surrey, where they remained for at least three weeks, showing themselves either on the ground in a meadow, or on the top of a tall oak or elm-tree. It was not possible to get within

shot of these birds, although every attempt was made that we could devise. In the autumn of 1840 we again saw one of this species near Pains Hill in the same county, in a birch-tree by the road-side. From the momentary observations we could make, it seemed to be very restless, and not long in one position. The beautiful grey of the upper plumage in this species is well set off by the black wings and tail, and the black band through the eye, by which they are rendered very conspicuous objects, and their spread tail, when on the ground, looks exceedingly majestic.

This bird is the most daring of its size, and it is said that he does not even allow one of the eagle tribe to fly by his roosting-place without pursuing him with cries and menaces. During the breeding time he will not permit a rook or crow to approach his nest. When on the wing, this Shrike does not fly rapidly, although with very quick motion of the wings, and proceeds in the same manner as the chaffinches. The call of this bird sounds like the words *shack, shack!* and *truewee*, is one of its spring notes. It is also said to sing very pleasingly a sort of warbling song.

This bird also utters a cry of distress, to induce some other bird from curiosity to come within its reach, for the purpose of catching it.

The Ash-coloured Shrike is easily tamed, even when taken in an adult state, and may be taught to catch small birds. When caged, they must be placed alone, or they would infallibly devour their neighbours.

The food of the Ash-coloured Shrike consists of beetles, grasshoppers, small frogs, birds, and mice, the latter of which constitute almost entirely its winter food.

Although he consumes many a small bird, they seem to be very little afraid of him; where the Shrike is more plentiful than with us, he has been seen among a flock of sparrows basking in the sun, and it seemed as if the sparrows had no

consciousness of his usual habit of putting an end to them. The mode of taking his prey is generally when perched or on the ground, when he takes hold of them both with his beak and claws: he takes them also on the wing. To show the courage of this bird it need only be stated, that he pounces upon thrushes, and takes even partridges when they are wounded or weak. When he has mastered his prey he does not stand upon it, but thrusts it between two stones, or in some narrow place, or fastens it on a thorn in a bush for the purpose of consuming it. During his migration he may be seen perched on a lump of earth in a field, or hovering in the air and descending quickly when he sees his prey in a promising position.

In the summer the food of this species consists principally of beetles and frogs, which has been proved by their disgorged pellets; while in the winter they principally eject feathers and mouse-hair. When they carry a mouse or bird of any size a certain distance, they exchange their load from the beak to the claws and back again, for the purpose of resting these members alternately, until they have reached their favourite bush.

The places most frequented by the Ash-coloured Shrike for the purpose of breeding are woods near pasture land. The nest is either placed in a tree of some height or in a branch of a wild fruit-tree, or in a tall maythorn bush, and appears very skilfully put together. The materials chosen are hay, stalks, twigs, heath, ground and tree-moss, and the whole is lined with wool and hair. The five, six, or seven eggs are hatched in about fifteen days.

The young birds have the first feathering greenish on the back.

The egg No. 42 belongs to the Ash-coloured Shrike.

The outlined head (fig. 42) is of this species, of the natural size.



Fig. 37





INSESSORES.
DENTIROSTRES.

LANIADÆ.

PLATE XLIII.

RED-BACKED SHRIKE.

LANIUS COLLURIO.

THE most prominent characters of the Red-backed Shrike, which it shares in common with its family, have been already described under the foregoing article, namely, its rapacity, and its cruel mode of feeding on wounded or half-killed prey.

Thus far we speak of its well known faults. It is also just to mention, as redeeming good qualities, the affection that exists between the male and female of this species, and their great attachment to their young. Of the former we had an opportunity of witnessing an instance, which we think on this account deserves noticing. In the month of June 1837, a male Red-backed Shrike was caught in a garden by a cat; the gardener, who saw the circumstance, succeeded in rescuing it from the animal the very moment it happened, in time to save its life. It was put into a cage and placed in a sitting-room in the house close by. There were several persons in the room at the time; but notwithstanding their moving about, the female, its companion, came in at the window, settled on the cage, and was secured by one of the party, without attempting to fly away; they were subsequently both placed in the same cage.

Respecting their attachment to their young, we have frequently remarked that the female will hardly fly from the

nest when she has eggs ; and if disturbed after the young are hatched, both parents remain either in the bush that contains the nest or on a neighbouring tree until the danger is past, and, to draw off attention from the spot, they keep moving in opposite directions, uttering all the while their alarm-cry. We have seen them help the young ones out of the nest for the purpose of hiding them in the thicket beneath, and the moment they have reached the ground not another chirp is heard from the nestlings, which have apparently received a signal to be quiet, although the parent birds, perched in a tree at a little distance, keep up a continual clamour.

This species is of frequent occurrence in the well-wooded districts of some of our southern counties, where it has often come under our observation, and where we have obtained many nests. In some parts of Surrey the eggs are so common as to be found strung among other ordinary eggs, in the possession of every little village urchin. Among the nests that we have met with we have observed much difference in size, not only externally, where they are naturally more or less bulky, according to the locality in which they are placed, but in the interior formation, so as to induce a belief that the larger nests might be those of the Grey Shrike (*Lanius excubitor*). The eggs also vary very considerably, both in size and colour : in some the surface is dull and chalky, others possess considerable polish, but those from the same nest usually resemble one another tolerably in all these particulars. One set in our possession has the ground colour greenish-white, with a zone of large blotches round the centre, varying from ash-grey to umber-brown, and minutely spotted over the rest of the surface with bistre. Another set has the ground colour flesh-red, the zone of large spots greyish-blue, and the rest of the surface sprinkled with dark red-brown. The one figured in the plate is a specimen of remarkable beauty, in which the spots are entirely confined to the zone or wreath. Another

nest, taken in Surrey, contains four eggs, whiter than usual in the ground colour, and much larger in size, all measuring above an inch in length ; these we are disposed to think are very probably the eggs of the Grey Shrike ; but the fact of their remaining in England to breed is not yet ascertained, although it is very possible, as they are known to do so in almost all the central parts of Europe.

All the eggs of the Shrikes, whatever may be their colour, retain, however, a peculiar character in their markings, and cannot be mistaken for any other family.

The nest of the Shrike is a very well built structure, composed, externally, of green moss, roots, and dry grasses ; next to these is an inner frame, or basket-work, of stout grass-stalks, interwoven with wool, and the lining, in all our specimens, is entirely composed of fine fibrous roots ; we do not find the lining of hair that is usually attributed to them. The nest, when complete, is both deep and capacious, as well as firm and thick, and the upper edge, or border, projects a little over the inside of the nest. The nest now before us is bound round the edges with one of the long trailing branches of a species of potentilla, that grows in great abundance on some parts of the shingly borders of the Thames. The nest is usually placed in a hedge, or thorn bush ; but concealment does not appear to be particularly sought for.

The food of the Red-backed Shrike consists of frogs, lizards, mice, and small birds ; also large insects, such as grasshoppers, beetles, and dragon-flies. These last-mentioned insects sometimes afford considerable sport, and sell their lives dearly, their peculiar flight affording great protection from their more powerful enemies. We once witnessed a very prolonged chase, of which one of these insects was the object, and, in all probability, it ultimately escaped from its pursuer. Passing, one day early in September,

along a piece of water, we observed a large dragon-fly flitting over it, of the kind commonly called a horse-stinger, and about four inches in length. While watching the sudden turns and beautiful evolutions of the insect, we saw a kingfisher in pursuit of it, and lost sight of both among the tall reeds. After having walked for some time about an adjoining field, we returned by the same way, and found the kingfisher still flying over the rushes in pursuit of the dragon-fly. The kingfisher's mode of attack was by darting in a straight line at the insect, which seemed to escape by turning quickly aside.

The Red-backed Shrike is well known all over Europe, in North America, and Africa; in our climate it is a summer visitor, retiring to warmer countries during winter. The chosen locality is underwood, particularly where thorn bushes, and larch and birch trees abound; among trees of larger size it is seldom found.

The manners of the Red-backed Shrike are much like those of the former species, and, in addition, they flourish their outspread tail to the right and left when excited, which appears as if they swung it in a circle. They sing very frequently; their note is pleasing, and they are often heard to imitate the notes of other birds. Their food, which has already been described, consists chiefly of insects of all kinds, which they watch for perched on a dead branch of a bush; and as soon as they perceive any they fly after them, and return again and again to their station. The present species is by far more cruel than the Grey Shrike or Wood-Shrike; they not only consume young birds, but also old ones, which they obtain in divers manners. We have an instance of a male bird, dragging young pipits out of their nest. Their habit of fastening their prey on a thorn is well known; also, that they are not satisfied to destroy what they want immediately, but stock their larder for bad weather, which is

the reason why several unfortunate victims may be sometimes found in this cruel situation on the divers thorns of the same bush; if birds, their brains have mostly been consumed.

The moult of this species takes place late in the autumn, after the birds have left us, and they return in their new feathers.

The entire length of the Red-backed Shrike is seven inches; the wing, from carpus to tip, three inches and a half; the tail measures rather more than three inches, and extends an inch and a half beyond the tips of the folded wings. The legs are long and slender; the tarsus measures nearly an inch; the feet are small; the beak is very strong and thick, hooked, and notched near the point.

The male, female, and young of this species differ considerably in their plumage. The adult male has the beak and legs black, and a black band crosses the forehead above the beak, and extends above and below the eye towards the nape. The rest of the head, the nape, and tippet, are fine blue-grey; the lower part of the back, and upper coverts of the tail, the same. The larger and lesser wing-coverts are rufous, and the same colour extends across the back; the rest of the wing is dusky, with a border of rufous on the tertial feathers. The throat and sides of the neck are white; the breast and all the under-parts pale yellowish-pink; the two central feathers of the tail are entirely black; all the other feathers are white at the base, and black toward the end of the feather, the black portion decreasing on each feather, so that the outer feather on each side retains but a single dark spot; all these are tipped with white. The eyelids are black, and the iris of the eye reddish-brown.

The female is ferruginous-brown on the upper parts, tinged on the nape and rump with ash-grey; under parts greyish-

white ; the feathers bordered with a dusky semicircular line. The young of the year nearly resemble the female, but some of the feathers on the rump have a narrow dark border.

The females and young resemble the young of the Wood-Shrike, which, however, may be distinguished from them by the white spot on the wing, which the present species never shows, and which, in all stages, exists in the Wood-Shrike.

Very old females nearly resemble the male in plumage.



N. 44.

INSESSORES.
DENTIROSTRES.

LANIADÆ.

PLATE XLIV.

WOOD-SHRIKE.

LANIUS RUFUS.

THIS beautiful species of Shrike is very rarely seen in England, and has not many years been included among British accidental visitants. We have once, only, had the pleasure of seeing it alive in a wild state; this we met with in the richly-wooded part of Surrey, between Hatchland, the estate of Holme Sumner, Esq., and Guildford. The red colour on the upper plumage first attracted our notice to the bird, which sat within four or five yards of us on a thin branch of an oak, where it remained for nearly a quarter of an hour, and allowed us to have a full and distinct view of it; it did not appear at all alarmed at our near approach, but took very little notice of us. Its attitude and general appearance we have represented in our plate.

The Wood-Shrike is found in most parts of Europe, from Sweden southward, and inhabits Africa, where it appears to be more generally known than elsewhere. We rather suspect that the vicinity of certain trees in any given district may attract this bird, and we are strengthened in this supposition by the Wood-Shrike being said to construct its nest in the branch of an oak, and to form it of tree moss, such as abounds on oaks, namely, the crisp white moss and the soft bright green; besides, the bird seen by

us was in such a locality, where young oaks constitute the greater part of the surrounding trees: the place was also sheltered and hilly.

The Wood-Shrike breeds in temperatures similar to our own, and may, perhaps, frequently visit this country, although the anxiety of landholders to preserve game excludes the general naturalist from seeking them where they are most likely to resort, namely, pheasant preserves and young plantations, which are not visited during the breeding-season, except by the keepers.

The nest consists of fibrous roots and twigs, intermixed with tree moss and dry grasses, and is lined with wool, feathers, and hair; the eggs found in them are generally five or six, in shape and colour like the one represented in our plate, No. 44. Both parents incubate them, and the young are hatched in a fortnight. The young birds are reared with beetles and other insects.

The food of the adult consists chiefly of the larger insects, and sometimes young birds; they take their food either from the ground or on the wing, as soon as they perceive it from their watching-place. Worms, grubs, and other larvæ of insects are also sought by them.

The character of the Wood-Shrike is not very amiable as regards his neighbours, whom he pursues with cries and menaces; the smaller birds stand in awe of him, and the larger, among which are reckoned pigeons, magpies, etc., are pursued and tormented by him.

His song is pleasing, and, in common with other branches of his family, he imitates the songs and call-notes of other birds very exactly.

The Wood-Shrike measures eight inches in length, and thirteen in expanse; the wings, from carpus to tip, three inches and three quarters; the beak is six lines from forehead to tip, fringed at the base with stiff hairs, and possesses

a prominent tooth near the tip. The tarsus is eleven lines in length.

The general appearance of this species differs much from that of the other Shrikes; the plumage of the adult male is as follows: the beak is bluish horn-colour at the tip, and flesh-coloured at the base, the legs slate-coloured, the iris pale-chestnut. The feathers round the base of the bill are white, as are all the under parts, and the scapulars of the wing; the rest of the wing is dusky, with the exception of the bases of the larger quill-feathers, which are pure white, forming a spot that at all ages distinguishes this species; the greater coverts are also narrowly tipped with white; the lower part of the back and rump are ash-grey. The top of the head, nape, and upper part of the tippet, are bright-chestnut. The forehead, lore, and ear-coverts, are black, which colour extends to the shoulders in a broad line, and covers the back; tail dusky, some of the outer feathers tipped and bordered with white. On the breast and belly the white is beautifully tinged with pink.

The female is reddish-brown on the upper part of the body; the under parts all soiled-white, all the feathers transversely rayed with brown. The young birds of the year have the iris greyish yellow.

INSESSORES.
DENTIROSTRES.

MERULIDÆ.

PLATE XLV.

DIPPER

CINCLUS AQUATICUS.

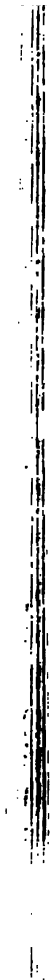
“The bird

Is here, the solitary bird, that makes
The rock his sole companion. Leafy vale,
Green bower, and hedgerow fair, and garden rich
With bud and bloom, delight him not ;—he bends
No spray, nor roams the wilderness of boughs,
Where love and song detain a million wings
Through all the summer morn—the summer eve :—
He has no fellowship with waving woods,—
He joins not in their merry minstrelsy,—
But flits from ledge to ledge, and through the day
Sings to the Highland waterfall, that speaks
To him in strains he loves, and lists
For ever.”*

IN these lines the favourite locality and the retired habits of the Dipper are well delineated, and in such scenes it is most frequently met with ; there its large mossy nest is constructed, among the fissures of the rocks, or sheltered by a ledge, and usually overhanging a mountain-stream, in whose waters its food is procured. By Selby, who is well acquainted through personal observation with this species, it is compared in its motions and manners to the wren, which it resembles

* From the *Saturday Magazine*, of Dec. 11, 1841, where they appeared under the name of “Carrington.”





in its habit of erecting its tail, in its song, its early breeding, and the appearance, form, and materials of its nest.

This species is a constant resident in Britain, locally distributed in accordance with its peculiar habits, and changing its quarters as the changes of the seasons may require. "During the severity of winter," says Selby, "it leaves the smaller mountain rivulets, then becoming frequently choked with ice and snow, and resorts to the larger streams which remain open, and afford a plentiful supply of food."

Scotland, Wales, and the north of England are the parts of Britain the most frequented by this species; it is not, however, entirely confined to these, it has occasionally been met with in quiet places in the southern counties of England. We have ourselves seen it by the side of the Mole, midway between Cobham and Esher bridge. This bird sat perched upon a lump of dried clay, close by the water side, where we observed it for some minutes; it was motionless, and in the hope of meeting with it again in this place, where we were not before aware of its being found, we were careful not to disturb it, and consequently did not see it fly. The locality was the best possible for this species, the bank steep and broken, well covered with dark foliage, and very lonely, as it belongs to the preserves of Claremont.

The nest of the Dipper, according to Montagu, is very large, with only a small opening in the side for ingress and egress. It is composed externally of moss, usually selected, for the purpose of concealment, from the immediate vicinity of the spot, in order to assimilate it with the locality chosen. One described by Montagu, was so well concealed in this manner that the existence of the nest was only detected by the old bird flying in with a fish in its bill. In this nest the young were incapable of flight, although nearly full-feathered, and, on being disturbed, fluttered out, and dropping into the water, instantly vanished, but in a little time made their appearance some distance down the stream.

The eggs of this species are about the size of those of the song-thrush, pure white in colour, and in number varying from four to six.

The food of the Dipper consists chiefly of the spawn of fish, and small fry, water insects, and their larvæ.

The pied and well-marked colours of this bird, although plain, render it a conspicuous object. The upper part of the head and neck are umber-brown; the chin, sides of the face, and breast, pure white; a circle of white feathers surrounds the eye; on the belly, below the white breast, is a band of dark reddish brown; all the rest of the plumage is greyish-black; the feathers on the back, scapulars, and upper tail-coverts are bordered with a fringe of a different texture from the centre of the feather, so that in different lights the fringe appears sometimes darker and sometimes lighter than the feather itself. The beak is black; the iris hazel; the legs greyish-dusky.

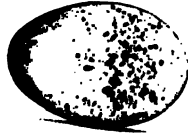
The female nearly resembles the male, but the brown colour of the head is darker, and the white breast not so pure in tint. In young birds the head and neck are grey, and the division between the white and brown on the under parts imperfect.

The entire length of the Dipper is seven inches and a half.

The egg No. 45 belongs to this species.

END OF THE FIRST VOLUME.

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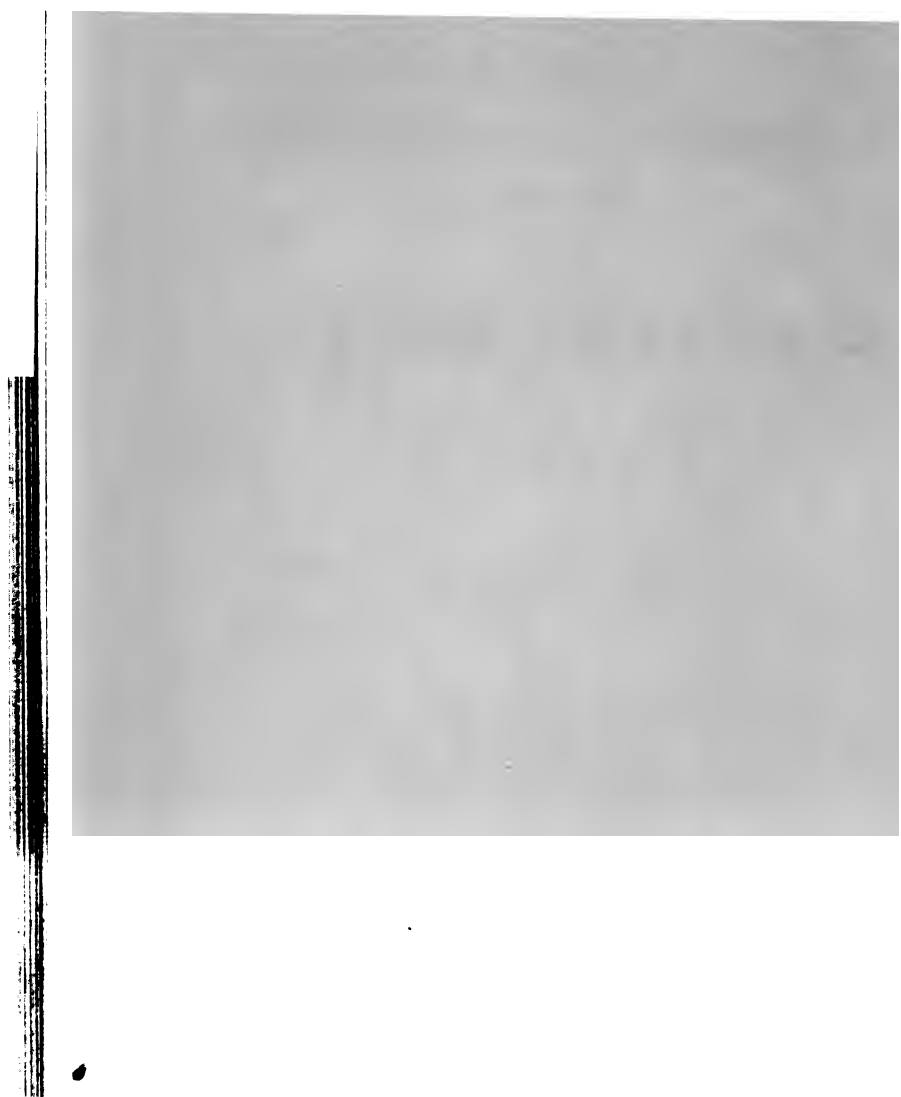
43.



44.



45.



COLOURED
ILLUSTRATIONS
OF
British Birds,
AND THEIR
Eggs.

BY H. L. MEYER.

VOL. II.

CONTAINING SIXTY PLATES.



LONDON:
GEORGE WILLIS, PIAZZA, COVENT GARDEN.
1853.

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ILLUSTRATIONS
OF
BRITISH BIRDS.

INSESSORES.
DENTIROSTRES.

MERULIDÆ.

PLATE XLVI.

MISSEL THRUSH.

MERULA VISCIVORA. (*Ray.*)

THIS very beautiful species exceeds in point of size all our British Thrushes, and we believe is also superior in this respect to all the remaining species of the Merulidæ common to Europe. In England it is of far less frequent occurrence than the song-thrush, and is partially distributed, preferring well-wooded and rather elevated districts. It is resident throughout the year with us, but more frequently seen in winter than in summer, as its wants at that season overcome its usual shyness, and it approaches nearer to our gardens, and visits hedge-rows in search of berries. It is a bird of unsocial habits, and in some parts of the Continent, where it is migratory, it is observed to travel alone, or, at most, in

small parties,—most probably the family of the preceding year,—and does not associate in flocks, as is the case with the fieldfare and redwing. Its quarrelsome disposition is apparent in the violent attacks it makes upon any intruder upon its chosen haunts. On this subject we have some curious particulars communicated by a friend, the Rev. E. J. Moor, from his journal:—"We have at this time, November 8th, on our lawn at Bealings, two whitethorn bushes, about twenty yards from each other, one well-covered with berries, the other getting very bare. The cause of this difference is, that a Misseltoe Thrush has taken possession of one, namely, the well-covered bush, which he has had for some weeks. Whenever a blackbird or common thrush lights on this bush he immediately drives it off very furiously. He suffers chaffinches and other small birds to come on, and seldom disturbs them at all, and never much; but he never allows a blackbird or thrush to remain on his bush for an instant. He does not disturb them if they go to the *other* whitethorn, where they may and do feed quite quietly. This bush is getting very thin of berries. The Misseltoe Thrush does not leave the lawn and its neighbourhood, nor join the flock of Missel Thrushes which sometimes comes upon the lawn. We have not, however, noticed the arrival of this flock since our Missel Thrush took possession of the bush. At this moment there are two blackbirds on their own bush feeding quietly.

"December 17.—I have observed the Misseltoe Thrush's bush almost every day, and have never seen one blackbird or thrush suffered to remain on it for an instant. There is scarcely a berry left on the blackbird's bush, but the Misseltoe Thrush's bush is quite red with them. He keeps sole possession.

"January 17, 1835.—A pair of Misseltoe Thrushes have now got the bush, who probably killed the original possessor,

as a fine dead Misseltoe Thrush was, a few days ago, found near the bush, having a wound in his head.

“ March 2.—A blackbird settled on the Misseltoe Thrush’s bush to-day. He was allowed to remain there, although a Misseltoe Thrush was singing on a fir-tree not far off, and quite within sight of what was going on in the bush. This seems to confirm the notion that the original possessor was killed by the more recent pair, who were either more pacific in their tempers, or were less moved by hunger to be tenacious, as now the birds are able to find other food besides berries.

“ October 15, 1836. — A Misseltoe Thrush usurping the same whitethorn bush on the lawn, at present only driving off blackbirds and such larger kinds of birds as before : chaffinches and other small birds are left to feed unmolested ; a jay, coming for a berry, was severely attacked, and at last obliged to quit the bush ; but he flew away with a berry in his bill.”

Besides berries of various sorts, including those of the misseltoe and juniper-tree, these thrushes feed upon snails, worms, beetles, grasshoppers, etc.

The nest of the Misseltoe Thrush is large and firm in construction ; it is built with a few sticks, dry grasses, and roots, interwoven together, within which is a stout lining of clay, similar to the blackbird’s, and lined thickly with fine grasses. The outside covering of the nest is either green moss or lichens, usually resembling in colour the branch on which the nest is placed : whether this similarity of colour is chosen for the purpose of concealment, or is merely in accordance with the beautiful harmony that is everywhere preserved in nature, we cannot decide ; but we have seen Missel Thrushes’ nests placed in situations so exposed that it would appear as if concealment for the purpose of safety was not considered as of any importance. We remember one

that was built on the outer branch of a small oak-tree, overhanging a lane, the common approach to the village for foot-passengers, where, before the leaves were out upon the tree, the hen bird might be plainly seen by every passer by, sitting upon her eggs, and not a hawk could fly over without observing the spot. This nest was, nevertheless, most carefully covered with the same white lichen with which the bark of the tree was clothed.

Much diversity of opinion appears to prevail with regard to the song of the Missel Thrush, whose voice is sometimes heard loud and clamorous on the approach of a storm, and sometimes raised in angry cadence when its rights are invaded by any intruder upon its haunts. Its song, properly so called, was considered by Montagu as superior to that of any other of the Merulidæ, although popular opinion usually gives the preference to the song thrush.

The Missel Thrush has also notes highly expressive of sorrow for the loss of its young. On this subject our friend, the Rev. E. J. Moor, says:—"This spring, 1841, I saw a hawk on our lawn, carrying off a young Misseltoe Thrush, just full-grown; the old birds were attacking the hawk furiously, uttering sounds highly expressive both of terror and anger. The hawk flew to a fir-tree close at hand, and there was forced to leave the young bird, and to fly away without it, the old birds following it still, but not with such loud notes as before. When they had driven the hawk to some distance, they returned to the fir-tree, and notes of lamentation were set up (I think only by one of the old ones, probably the female). The notes were faint, moaning, and periodical; very different in expression from those lately uttered, and seemed very clearly to tell that the young one had died under the talons of the enemy."

The Missel Thrush is common, and resident throughout the year in most of the temperate parts of Europe, except

Holland, where it is very rare. In Thuringia, Bechstein speaks of it as a bird of passage, leaving that part in December, and returning in February.

Its French name, *Draine*, and its German appellation, *Schnarre*, according to Temminck, are descriptive of its noisy vociferations whenever its nest is approached. Brehm calls this species *Baum Drossel* (Tree Thrush), from its custom of sitting singing upon taller trees than are frequented by other species.

The Missel Thrush may be easily reared from the nest, and becomes very tame; it will eat almost any kind of food, meat, bread and milk, oatmeal moistened into a paste, etc. It is a very hungry bird, and requires to be kept in a large cage, as it is very careless of its plumage; it also needs much water for bathing, in which it much delights.

The Missel Thrush, although dressed in very sober colours, is a handsome bird. Its upper plumage is olive-brown, tinged with ash, wing-coverts brown, bordered with dull-white, the lower part of the back, and upper coverts of the tail, lighter brown, inclined to rufous. The quill-feathers dusky, edged with cinereous, as also the tail, which has some of the outer feathers tipped with white. The under coverts of the wings are greyish-white, and there is a streak of the same colour between the beak and the eye. The beak is brown, yellowish at the base; the iris brown; the legs and toes brownish flesh-colour. The under parts of the bird are white, tinged with yellow-ochre, each feather marked at the tip with a dusky spot, which is of a round form on the breast, belly, and flanks, angular on the sides of the neck; the ear-coverts are greyish-white, spotted with brown. The female very nearly resembles the male, but is whiter on the under parts. The young of the year are paler and more ash-coloured on the upper parts; the feathers of the head, neck, and scapulars, mottled with white.

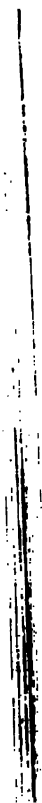
The eggs of this species vary somewhat in colour and markings ; some are greenish-white, spotted with brownish-red and purple, others are reddish-white in the ground-colour, with large blotches of red-brown : they also differ much in size, the one figured in our plate being a large specimen. They are usually four or five in number.

The entire length of the Missel Thrush is eleven inches ; the wing, from the carpus to the tip, six inches ; the tarsus one inch and a quarter ; the middle toe one inch ; the bill, from the forehead, three quarters of an inch.

The generic characters of the *Merulidæ* are :—Bill, of moderate length, slightly notched near the tip, straight at the base, and inclining downwards at the point ; nostrils partly covered with a membrane ; gape fringed with bristles ; legs of moderate length and strength, the tarsus longer than the middle toe ; the outer and middle toes united at the base. The first quill-feather very short, the third and fourth the longest in the wing. The flesh of all this genus is remarkably good.

The egg No. 46 belongs to the Missel Thrush.





INSESSORES.
DENTIROSTRES.

MERULIDÆ.

PLATE XLVII.

JAPANESE THRUSH.

TURDUS VARIOUS. (*Horsfield.*)

THE rare species, called by British ornithologists White's Thrush, the *Turdus various* of Java,* and the *Turdus aureus* of the Moselle,† are by Temminck brought under one article; and we think the reasons assigned by this eminent ornithologist may be the most acceptable information that can be given respecting a bird so little known in England. "No other distinction," says Temminck, "than a slight difference in the size of the beak can be observed between the two races of this species, of which the one appears occasionally in Europe, and is found as far eastward as Japan; the other is met with from the Isles of Sunda to New Holland. These latter have the beak usually a little longer, and rather more robust than the race which shows itself occasionally in our latitudes, and of which specimens are received from Japan; although, in a great number of subjects from India which I have examined I have found individuals whose beak was certainly neither larger nor longer than those of specimens from Japan. I unite them, consequently, contrary to the opinion of Mr. Gould, who makes two species of them, and appears also much inclined to form a third, for the reception of subjects from Australia."

* Horsf., in Zoological Researches in Java. † Stoll, Faune de la Moselle.

“At Java this species is found only in mountains from six to seven thousand feet in height. In Japan it inhabits also lofty mountains. Its food is said to consist of insects and worms.

“This species visits, occasionally, the west of Europe; it is abundant in Japan, and perhaps may abound equally in other parts of Asia, from whence, probably, the specimens have come that were obtained in Europe.

“In the colouring of the two subjects taken at Hamburg, and the specimens that came from Japan, I have not been able to detect any marked difference, and only a slight difference can be observed in the size of the beak between these and the Javanese specimens. Subjects from Australia exceed those from Japan and Java a little in size, although they wear the same plumage.”

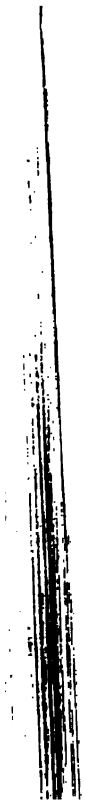
The above is a free translation of the information on this subject, contained in the fourth volume of Temminck's *Manual d'Ornithologie*; and when we consider the favourable opportunity possessed by that author of studying Oriental specimens from Java and Japan, we cannot but consider his opinion as of the utmost weight.

The specimens that have been noticed of this species as occurring in Europe, are two, shot on the Elbe; a third, supposed to have been shot in the New Forest, Hampshire, now in the possession of Mr. Bigge of Hampton Court; and a fourth, that was shot also in Hampshire by the Earl of Malmsbury.

The bird figured in our plate is from a subject in the museum of the Zoological Society, from which we took the following measurements:—Length of the wing, from the carpus to the tip, six inches and three-eighths; length of the beak from the forehead to the tip, eleven lines; from the tip to the gape, one inch five lines; length of the tarsus, one inch one line; of the middle toe, one inch

six lines ; of the hind toe, one inch. The tail has fourteen feathers. In the relative measurements of the tarsus and middle toe this Thrush differs from the characters usually quoted by systematists as belonging to the Thrushes, whether taken as restricted to the *Merulidæ*, or in the more enlarged sense of the genus *Turdus*, namely, "tarsus longer than the middle toe," this specimen having the tarsus *shorter* than the middle toe by nearly half an inch.

It is to be presumed that this Thrush does not vary in the tints of the plumage, or in the distribution of the colours, from circumstances of age or sex, since Temminck describes all he has seen as similar in appearance.





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MERULIDÆ.

PLATE XLVIII.

FIELDFARE.

MERULA PILARIS.

THE FIELDFARE, the next of this beautiful tribe that offers itself to our notice, is a native of the sombre forests of the north of Europe. In these wild regions it passes the short summer season ; but it is unable to sustain any great degree of cold, and is consequently found to commence its migration southward in September or October.

Fieldfares perform their journeys in large companies, and great numbers of these birds spread themselves over all the countries of the middle parts of Europe, shifting their quarters from time to time as the various changes of the season, the supply of food, or other exigencies may require. In mild and open weather they are seen to frequent low meadow-grounds, for the sake of the worms and other insects that are to be found there ; but when from severe frost these resources fail them, they resort to hedges and copses of white-thorn, juniper, and other berries, on which they become very fat, and are then delicious eating.

In Britain they make their appearance about November ; and we have constantly observed their arrival to be the forerunner of increased cold in the atmosphere, the Fieldfares preceding the change of the temperature by about two days. They appear unable to bear the cold so well as the native

thrushes of our country, and in severe weather either flock to sheltered situations, where plenty of food can be procured, or pass on towards warmer countries, from whence they return in March or April; and again leave us, to proceed northward towards their summer breeding stations.

Very few instances of the Fieldfare remaining to breed in England have been authenticated, the greater part retreating northward to Sweden, Norway, and Russia.

In those countries Fieldfares have been found rearing their young in large numbers, and, contrary to the habits of other thrushes, living in society.

The nest of the Fieldfare is described as resembling very much those of the blackbird and ring ouzel, composed externally of coarse grass and weeds, plastered within with mud, and lined with grasses of a finer texture. The eggs are from four to six in number, and much resemble those of the blackbird.

Fieldfares are considered a great delicacy in Germany during autumn, where they are taken in great numbers by means of horse-hair springes, and sent as presents to other parts of the Continent, where they are scarce. The chief cause of their fine flavour is to be attributed to their being obliged, by severe frosty weather, to live upon juniper berries, which grow in very great abundance along the Rhine and other wooded districts. When these birds are packed up for the purpose of transport, they are half-plucked, and packed in fresh-gathered juniper berries, which also contributes greatly to increase the flavour. The German name of this bird is Wachholder Drossel, which signifies Juniper Thrush.

It may be acceptable to persons living in the country to know how, on the Continent, we set traps for taking these birds, and consequently we give the description as follows:—

A twig, about a yard long,—willow is the best wood for

the purpose,—is bent in the form of a triangle, and fastened by one corner to the branch of a shrub about four feet from the ground; to each side of the triangle is fixed a horse-hair noose, which hangs over a mountain-ash berry that is stuck in a slit in the centre or horizontal part of the triangle; and in a plantation or pleasure-ground, right and left of the paths, such traps should be tied, in the way described, about three feet apart, and regularly supplied with berries every day about noon, when the snared birds are taken out, and the horse-hairs properly disposed. We have taken from one to three hundred birds of the thrush tribe in one morning, in Holland, in this manner.

The Fieldfare is found southward as far as Syria and Asia Minor; it is also very common in autumn in some parts of the valleys of the Swiss Alps. It is said to remain the whole year in Austria.

The song of the Fieldfare is stated by Bechstein to be only a harsh disagreeable warble, but it is said by others to have notes soft and agreeable. We have never heard it sing, as we have only had this species caged in the winter.

The colouring of the Fieldfare is more varied than that of the two preceding thrushes; the head and nape of the neck are fine grey, the former spotted with dusky; the back, shoulders, and lesser coverts of the wings, chesnut-brown; the larger coverts rust-brown, with a greyish tinge: the quill and tail-feathers dusky; the lower part of the back greenish-grey. The chin, sides of the neck, and breast, are pale rust-yellow, marked with blackish heart-shaped spots; the flanks are similarly marked, upon a white ground. A pale-buff line extends from the forehead over the eye. The feathers between the bill and eye are black, and the same colour extends beneath the eye and over part of the ear-coverts; a dark line also passes from the corner of the lower mandible to behind the ears, in a semicircle. The

iris is dark-brown; the eye-lid, inside and corners of the mouth, yellow, which in the spring approach to orange. The beak is rich yellow in summer, with a black tip; in winter it is tinged with brown. The legs are dark-brown.

In the female the colours are less pure.

The Fieldfare is about ten inches in length; some measure more; the wing measures, from carpus to tip, five inches and a half; the tail is four inches and a quarter long, and the wings reach nearly half-way down it when closed: the tarsus measures one inch four lines, the middle toe one inch three lines, the hinder, nine lines; the claws are large in proportion, particularly the hinder.

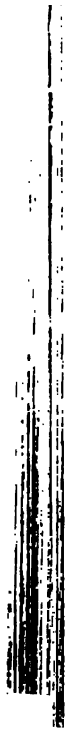
The egg No. 48 belongs to the Fieldfare.



46.



48.





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DENTIROSTRES.*

MERULIDÆ.

PLATE XLIX.

SONG THRUSH.

MERULA MUSICA.

THIS well-known bird, one of our finest singers if we except the redbreast, is, like him, not only British by birth, but a constant resident in his native land. His sweet and varied song begins with the dawn, and continues, at intervals, throughout the day; but the evening appears the time in which he most delights,—then he pours forth uninterruptedly his rich and eloquent strain. “Of all our resident birds, the inflexions of its notes are the most modulated, distinct, and harmonious. Perched on the naked branch of a tree, this charming vocalist continues to pour forth his clear, melodious strains; gradually they rise in strength, then fall in gentle cadences, becoming at length so low as to be scarcely audible; especially towards evening, the song is continued almost without intermission, and does not entirely cease till night draws round its sable shroud.” If conscious of being observed, his song suddenly ceases, and he silently drops from his branch into the underwood beneath.

The song of this species is divided into distinct modulations, each consisting of four or five syllables; every modulation is repeated in exactly the same form, after the manner of the nightingale, from three or four to about seven times, and then exchanged for another movement.

These are sometimes slowly, sometimes rapidly, pronounced, and the tones so varied as often to appear to proceed from several songsters, placed at different distances from the listener. We have heard Song Thrushes imitate very successfully the beautiful chant of the nightingale.

The Song Thrush is very generally diffused throughout England; and as it does not confine itself to the woods, as the missel thrush does, it is more seen and known. It is the least shy of the Thrush tribe; it inhabits and frequents gardens at all seasons, but in winter we have known it almost as familiar as the robin, and if care is taken to invite it with a little food, will approach close to the windows in search of it. One hard winter, observing several thrushes in the garden, we collected from some hidden corners, where we knew we should not look in vain, a number of common garden snails, which we strewed beneath the laurel bushes where the snow was scantiest. Our snails were soon discovered by the thrushes, and a convenient stone being selected, which the hard frost had glued into the grass-plot, the snails were ere long consumed.

The manner in which birds of this tribe break the shells of snails to procure their flesh is, of course, well known; but these thrushes are in habits, as in descent, truly ancient Britons, and regularly return to the stone they have chosen for their cromlech, on which they sacrifice their victims.

The Song Thrush is a very early singer, beginning his song frequently with the new year. In a "comparative view of seven years," supplied by a friend, this bird is cited as beginning to sing between January the 3rd and February the 26th, according to the season. It is also one of the earliest in commencing nidification, and usually constructs its nest among the branches of a low bush, or in the midst of overhanging brambles beside a ditch or bank, and as the nest is often placed among deciduous shrubs that have not

yet regained their spring leafing, it is frequently very conspicuous.

The usual materials for the construction of the nest are a few dry twigs, chiefly those of the birch-tree, interwoven with green moss and grass stalks, so as to form a frame of basket-work, very beautifully constructed: this is lined with a thin layer of cow-dung, which forms the interior of the nest, there being no after-lining of grass, as in the nests of the missel thrush and blackbird. This unlined nest is, nevertheless, warm and sheltered, on account of its depth, and the impervious nature of its lining. The nest of this species is remarkably light, when compared with the nests of our other indigenous species. Among some ordinary sized nests in our possession, one of the blackbird weighs six ounces, whilst a nest of this species, on account of the superior lightness of the material used in lining, weighs only three. The missel thrush's nest is still heavier than that of the blackbird. Although so light and thin, the Song Thrushes' nests possess a great tenacity, and power of resisting the influence of the winds and storms, so prevalent at the early period of the year at which they are constructed. The Rev. E. Moor says, in reference to this subject, "A very violent hurricane of wind occurred this afternoon, November the 29th, the most violent I ever witnessed: the whole day was boisterous, but the hour's hurricane excessive. Several fir-trees, &c., were blown down on the lawn and other places of the farm. Several days after this storm I was at the Rev. W. Kirby's house at Barham, and saw a Thrush's nest standing firm on the branch of an elm-tree in his garden; the nest was in an exposed place; it had been there ever since the spring, and appeared in no way injured by the violence of the storm."

The Song Thrush, as before mentioned, breeds very early. By the beginning of April nests may be found containing

eggs, and young birds are frequently hatched about the middle of the month.

The Song Thrush is watchful and cunning when it thinks danger is near; if pursued by a sportsman along a hedge it skulks into a thick part, where it carefully lies concealed until its pursuer has safely passed the spot, and then flies off in an opposite direction, with a loud chattering noise, as if rejoicing in the disappointment of its enemy.

The entire length of the Song Thrush is nearly nine inches. The beak from the forehead to the tip measures eight lines; from the tip to the gape one inch. The wing from the carpus to the tip is four inches and a half; the tail extends an inch and a half beyond the closed wings. The tarsus is one inch four lines in length; the middle toe about one inch.

The plumage of the upper parts from the forehead to the tail, olive brown; the wing-coverts and tertials wood-brown, edged and tipped with pale buff. The spurious wing and secondaries edged with rufous; the primary quill-feathers dusky, bordered with pale ochre, yellow at the roots; the tail wood-brown; under-coverts of the tail white. On the under plumage the chin, belly, and vent are white; the breast and flanks are rust-colour, more or less tinged with olive; the ear-coverts dusky. The upper mandible is dusky; the ridge of the upper mandible and the greater part of the lower mandible straw-colour; the orbits are straw-colour, and an irregular line of the same passes from the lower mandible and borders the ear-coverts. A dusky grey line passes from the nostril to the orbit of the eye, over which runs a line of flesh-colour, extending backwards above the eye. The legs and feet are brownish flesh-colour. The iris is rich dark-brown; the eyelid grey.

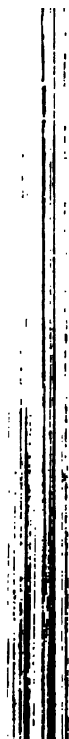
The young bird when still a nestling has the top of the head hair-brown, mottled with rust-colour; the wing-coverts

and mantle also brown, with a spot of rust-colour upon the shaft of each feather ; the greater coverts of the wings and the tertials are clove-brown ; the quill-feathers of the wings and tail are dusky. The under parts of the bird are spotted as in the adult, but the rufous colour on the sides of the face and chin is darker. The inside of the mouth is orange, the corners of the gape bright yellow.

Although the Song Thrush is indigenous with us, and does not find occasion to leave our islands, the number of them is greatly increased by flocks which migrate from the northern parts of Europe to milder climates, in autumn. Hence may arise the not unfrequent occurrence of the white variety of this species. About a year and a half ago, a friend of ours informed us, that a gentleman residing in London had brought up a brood of white Song Thrushes, four in number, which were then in perfect health and spirits.

It may here be acceptable to know that the best mode of rearing young Thrushes is by feeding them with fig-dust, mixed up with water to a paste-like consistence ; now and then, also, an egg chopped up in this food, or a little raw meat, chopped up with bread. It is very necessary to pay particular attention to keep the cages of young birds clean and dry, or they will invariably die of cramp.

The egg No. 49 belongs to this species.







*INSESSORES.
DENTIROSTRES.*

MERULIDÆ.

PLATE L.

REDWING.

MERULA ILIACA.

TOWARDS the end of October, or beginning of November, vast flocks of this species begin to arrive from the north of Europe, where they have passed the summer months; their appearance is usually, like that of the fieldfare, the precursor of increasing cold, from which they are taught to flee by the unerring guide of nature. Their arrival in this our southern part of England does not exhibit the peculiar features that distinguish it in Holland, and other parts of the Continent, which may be supposed to be their first resting-place in their passage from the north to more southern climates. Here, their arrival and times of feeding are not confined to any particular period of the day; in Holland, on the contrary, so regularly do the flights of this bird arrive after a night's passage that particular hours of the day may be stated as the times when they alight to feed. So certain is this, that every child in Holland knows that eleven and three o'clock are the times when our traps must be visited for Redwings, and other migratory thrushes, which have been snared between the hours of nine and ten in the morning and one and two in the afternoon. The construction of these traps we have already described in the account of the fieldfare.

In fine weather, it is supposed that Redwings travel all

night, as at such times they have been observed to alight in the morning in a state of much exhaustion, as if from a lengthened flight. Tall hawthorn-trees are frequently chosen for a resting-place after their journey; on these they may be seen to rest in great numbers, making at the same time a loud chattering noise.

They may be easily approached, and consequently fall a ready prey; and their flesh is very delicious. The cause of the tameness, or unconsciousness of danger, which this species exhibits, may be traced to their northern origin, being chiefly reared in uninhabited wildernesses and forests, where human enemies, at least, are rarely met with, and are, consequently seen without apprehension.

These birds have some notes by which their presence is frequently betrayed; these sound much like the touch of steel upon a grinding wheel. Redwings may easily be preserved alive if kept in a large aviary, and soon become tame and sociable; they are lively and clean, but it is to be presumed that they do not exert, when caged, the powers of singing that they are said so eminently to display in a wild state, since Bechstein, who speaks of keeping them for several years in confinement, does not appear at all conscious of their vocal powers, which have, on the other hand, been so much admired by persons who have heard these birds to advantage among their native woods during the summer season.

While in this country, their food is observed to consist of worms, slugs, beetles, and other insects and their larvæ, which they seek in woods and moist places, and in low meadow-lands, where they may be observed carefully seeking for them among the fallen leaves; they also eat berries occasionally.

The Redwing is more tender than the other species of migratory thrushes; and on the first approach of severe wea-

ther, leaves England for countries situated still further to the south, whence it does not return to us before February or March, about which time it may again be seen in vast flights, travelling onwards towards its native forests in a north-easterly direction.

Redwings breed in Norway and Sweden, Poland, Russia, and Iceland, preferring woods of the alder, or birch-tree: their nests are placed among thick foliage, and are said to be similar to that of the song thrush. Some authorities also state, that the eggs of the Redwing resemble those of the song thrush in colour and markings, although inferior in size: while others describe them as more like those of the missel thrush; in which latter opinion we are supported by the British Museum, which possesses a solitary specimen, from which our drawing and plate were taken.

The Redwing is said to produce two broods in the year.

The whole of the upper plumage of the Redwing, including the wings and tail, is olive-brown: from the base of the beak a pale rufous-yellow band passes over the eye and extends backwards towards the nape; beneath this, a dark streak, following the same direction, passes, as it were, through the eye; the cheeks are dusky, with paler shafts to the feathers, and are bounded below by a yellowish-white band, which passes from the base of the bill to the back of the ear-coverts; below this line is a patch of bright rufous on the sides of the neck, mottled with brown; all the under-parts, as the chin, throat, breast, belly, and vent, are pure white, beautifully spotted with angular and drop-shaped marks of a dark olive-brown colour. The beak is dusky, the basal half of the lower mandible and the corners of the mouth are yellow. From the base of the lower mandible, on each side of the throat, descends a continued line of spots, so dark and closely set as to form a triangular-shaped patch below the ear-coverts; a little band of the same

spots crosses the middle of the throat, leaving the chin and upper part of the breast pure white. The under surface of the wings and tail are pearl grey. The under coverts of the wings and flanks are richly dyed with a bright rufous-colour; from whence its popular name of Redwing is derived.

The legs are yellowish flesh-red, the soles of the feet yellow. The iris is dark-brown; the eye-lid is reddish-grey in the winter, yellowish in the spring.

The male and female are very nearly alike, but the colours of the female are not so distinct.

The Redwing measures about eight inches in length.

The egg No. 50 is that of the Redwing.





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MERULIDÆ.

PLATE LI.

BLACKBIRD.

MERULA VULGARIS.

MORE shy than the missel and song thrush, the Blackbird, although a frequenter of gardens and orchards, is generally only seen in the act of flight, hurrying with guilty haste to escape from observation, conscious perhaps of some deed of pilfering in which it has just been engaged; for with all our partiality for this delightful singer, we must acknowledge that our cherries, currants, and raspberries have not a more determined enemy. As soon as it is light these pilferers commence their work, delighting us, however, at intervals, as if to make amends, with their sweet melody.

Shy in its disposition and solitary in its habits, this bird conceals itself in thickets, brushwood, and clumps of evergreens, which its short wings enable it to thread with ease and celerity. Moist woods, and tangled copses by the river side, or, in winter, springy places are much sought for, as affording worms, slugs, and other ground insects, in which this bird delights. Whenever it ventures from the shelter of these retired spots it flies with haste and precipitation; and its colouring is so out of harmony with all surrounding objects as to render it of conspicuous appearance. In a snow-scene only is its shining black plumage seen to advantage, there it is truly picturesque. When

on the ground the Blackbird runs lightly, and looks timidly about, and while searching for worms and other ground insects, frequently raises and depresses its tail with sudden jerks, accompanied by a lateral expansion of the tail-feathers.

The song of this species is less varied than that of the song thrush, but the tones are rich, soft, and mellow. It is said not to sing so early in the year as some other of our *Merulidæ*. Bechstein considers its period of singing in a wild state to be restricted to spring and summer months, commencing with March, but when caged it sings nearly all the year.

The food of the Blackbird varies with the season, and consists in spring and summer of insects and fruits; in autumn and winter berries form great part of their subsistence, together with the larvæ of insects, which they seek for beneath dead leaves or in moist and shady places.

The Blackbird is usually seen alone, and never associates in flocks; the parents and the young family are only seen together for a short period after the latter quit the nest, and then disperse. They are quarrelsome in disposition, and in spring the male bird is very jealous of the approach of any other of the feathered race to the locality he has chosen for himself.

The Blackbird is an early breeder, often preceding the song thrush. Its nest is erected about three or four feet from the ground in a whin or thorn-bush, in copse or hedge-rows, and formed much like that of the missel thrush, as far as regards the interior lining of grass and the wall of clay, but the outside is less ornamented with moss and lichens. In the specimen before us, the exterior is interwoven with dry fern, the stalks of grasses, and a little green moss; the inside mattress, which is two inches thick in some parts, consists of finer grasses mixed with skeleton holly leaves. We have seen the nest of a Blackbird so neatly embedded in a

bank that it could only be detected when the bird had flown off, by the form of the circular orifice ; the rim or border of the nest not rising above the surrounding surface of the bank.

Five is the usual number of the Blackbird's eggs, and the colour is pale greenish-blue, speckled with reddish-brown. In preserved specimens the blue colour soon fades to dirty white.

This species is common throughout the greater part of Europe and Asia, extending as far northward as Norway, and as far southward as Syria. In Germany it remains all the year, contrary to the song and other thrushes, which migrate there in winter.

The Blackbird is about ten inches in length : the wings measure nearly five inches from the carpus to the tip, beyond which the tail extends about two inches and a half.

The entire plumage of the adult male is shining black. The eyelids are bright red-lead ; the beak is of a similar colour, shading off to gamboge at the tip : in winter the beak and eyelids are paler and more yellow. The legs and toes are brown ; the claws dusky.

The hen Blackbird has no resemblance in colour to the male : the feathers of all the upper parts are olivaceous dusky, darkest on the rump and tail, palest on the forehead and sides of the neck. The outer webs of the quill and tail-feathers are edged with cinereous brown ; the cheeks are dark-brown, with lighter streaks along the shafts. The chin is greyish-white, passing into brownish-rust colour on the upper part of the breast : the under parts of the body are dark cinereous ; all the feathers from the chin to the vent are darkest in the centre, forming dusky spots upon the plumage. The beak is dark-brown, with yellowish-brown edges, and the eyelids yellow.

The young nestlings of this species are dusky-brown,

speckled over with ochre-yellow ; the beak and feet are reddish-grey, the corners of the mouth and eyelids dirty orange ; the young males may be distinguished by their darker plumage. After the first autumnal moult the young male birds nearly resemble the adult, except in the under parts of the body, where the black feathers are broadly bordered with ash-grey, and the adult plumage is not entirely perfected until after the second autumnal change. A beautiful specimen of the white variety of the Blackbird has for some time been an inhabitant of the Zoological Gardens in the Regent's Park. This beautiful little bird appears perfectly inoffensive and gentle ; in colour it is of a lovely cream or ivory-white, with reddish beak and orbits.

The egg No. 51 is that of the Blackbird.



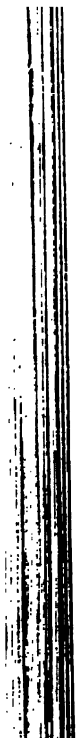
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50.



51.





INSESSORES.
DENTIROSTRES.

MERULIDÆ.

PLATE LII.

RING OUSEL.

MERULA TORQUATA.

THE RING OUSEL, or Mountain Blackbird, is a native of rocky and mountainous districts, and although it appears to be more common, during summer, in the north than in the south of Europe, we cannot agree with Bechstein that it breeds only in the north. According to the observations of naturalists visiting the north of Europe, it does not penetrate so far as the song thrush. Norway appears to be the limit of its summer residence; and in that country it is seen in great numbers among the barren rocks bordering on the sea-coast. In Sweden it is also found, but in less considerable numbers. In Germany, the Ring Ousel is a common bird in summer, upon the mountainous parts; and it breeds also in Switzerland among the rocks in many elevated districts.

The geographical distribution of this bird appears therefore very extensive during the summer, as it is found to breed throughout Europe from north to south, where the nature of the country is sufficiently mountainous, barren, and wild. The *elevation* of the district appears to be the source of attraction more than the mere temperature that results from latitude; otherwise, these birds would be found in Denmark, Holland, and Prussia, which is not the case;

neither are they recorded to breed in the vast extent of Russia. Following up these views, we naturally look for the Mountain Blackbird in the most mountainous and hilly parts of England, Scotland, and Wales; and we are not disappointed in the search. In Argyleshire, in the range of the Cheviot Hills, in Durham, Cumberland, and Yorkshire; in Derbyshire, and in the mountainous parts of Wales and of Ireland they are well known during the summer season.

The partiality of this species for hilly districts, to which it entirely confines itself during the greater part of the summer, causes it to appear more rare at that season than perhaps is really the case, since there is every probability that the numbers that are seen in autumn upon certain parts of our southern coast have, in fact, been bred in England or Wales, or at most, not farther distant than Scotland.

As soon as the first chills of autumn begin to be felt upon these elevated districts the Ring Ousels descend to the plains surrounding their native hills, and feed upon insects and worms, juniper, mountain ash, and other berries. In France, at this season, they frequent vineyards in like manner, where they commit great depredations. About October these birds commence their journey of retreat towards the south; and it is believed that the greater part of them retire beyond the Mediterranean, and winter in the countries of Africa that border on that sea. Some are seen, however, to remain during this season in Italy. Their migrations are generally performed in pairs, or singly, this bird being of solitary habits and disposition; small flocks are, nevertheless, seen collected, at the period of migration, on the southern coast of our island, as if waiting for a favourable opportunity to pass the Channel; but they do not associate or breed in large companies, like some other members of the thrush tribe.

In its form and general appearance, in its solitary and shy habits, and in its food, the Ring Ousel much resembles its congener, the blackbird: its song also is said to bear great resemblance to that of the blackbird, being melodious and highly agreeable, although its voice does not possess so much power. It has also the same manners and actions, and its call-note resembles the word *tuk*.

When arrived, about May, at its summer rocky destination, this species commences nidification. The manner of its nest, the materials of which it is composed, and the size, number, and appearance of the eggs, also strikingly resemble those of the blackbird, but the site chosen is different; this is always exposed and unprotected, and the nest is placed upon a bank or among the rocks, unsheltered either by bush or herbage.

In adult plumage the Ring Ousel is a bird of handsome and striking appearance, and from its beauty deserves a better reception than it frequently meets with, when descending from its mountain retreat it encounters the merciless eye of the sportsman, who is at that season ready armed for destruction, and whose attention is arrested by the singular appearance of its pure white crescent.

In length this species measures about twelve inches, and eighteen in expanse. The wing is short in proportion to the size of the bird, measuring less than five and a half inches from the carpus to the tip: the first quill-feather is remarkably short, not measuring more than half an inch, the second a little exceeds the fifth, and the third is the longest in the wing: the first three or four quills are much pointed at the extremity. The tarsus measures an inch and a half nearly, the middle toe and claw an inch and a quarter; the outer toe is closely united to the middle one, and the claws of all are laterally compressed and remarkably blunt, from the friction, probably, of the rocks on which they are accus-

tomed to perch. The beak is stout, and the ridge of the upper mandible advances a little upon the forehead: the nostril is large and oval, the base of the beak beset with short but stiff bristles, and the space between the nostril and the eye is covered with closely set hair-like feathering. The beak is notched near the tip, and the upper line of it very gently curved from the base; the tail is four inches in length, and is covered nearly half way down by the folded wings.

In the adult male the crescent-shaped gorget on the breast is pure white, the rest of the plumage dull black, which is darkest on the head, neck, and breast, and palest on the quill-feathers, particularly towards the tips of the primaries. With the exception of the feathers between the bill and eye, and the front of the cheeks, every individual feather is edged with a paler colour. Those of the top of the head, neck, and back are narrowly edged with cinereous ash; the shoulders and feathers of the under parts, as well as those of the wings, are edged rather broader with pale ash-grey. The outer webs of the greater wing-coverts and tertials are also tinged with ash in addition to their edging. The tail feathers are uniform sooty black, with the exception of the outer, which is narrowly edged with pale ash; the under colour of the tail is dark grey, the wings are paler underneath, and the under coverts of the same pale grey mixed with brownish-ash. The beak is horn-coloured, the inside of the mouth and corners of the gape yellow. Both mandibles are yellow at the base in the spring. The iris is dark brown; the eyelid yellow; the legs and feet are dusky with yellowish soles.

The adult bird is more uniformly black in spring, in consequence of the natural wearing off of the edges of the feathers.

The younger the Ring Ousel the more broadly are the feathers edged, and the less clear and distinct is the gorget on the breast.

A fine young male, shot in autumn on Shepperton Range, Middlesex, has the entire upper plumage so broadly edged with olive-grey that very little of the central part of each feather is visible. All the feathers of the wings are dark olive, edged with yellowish white ; the under plumage the same, edged with a fainter and narrower border. The chin is white ; from thence to the crescent on the breast the feathers are black, bordered with yellowish white, giving a tessellated appearance. The crescent is brownish white, much obscured by a semi-lunar dusky line that each feather bears near the tip : the tail feathers as in the adult. This bird was unknown to the party who shot it, who was a person experienced in local ornithology ; a proof of its rarity in this part of the country.

The German name of Drossel, which is in Germany common to this and other species of the thrush tribe, such as ring-drossel, mistel-drossel, &c., we retain only as derived doubtless from our Saxon ancestors, in a local appellation of the song thrush, which is in many parts of the country called the throstle.

The egg figured 52 is that of the Ring Ousel.

INSESSORES.
DENTIROSTRES.

MERULIDÆ.

PLATE LIII.

GOLDEN ORIOLE.

ORIOLOUS GALBULA.

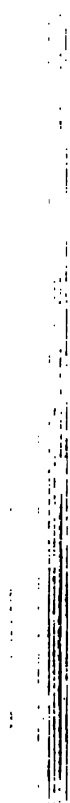
FROM the singular call-note of the Golden Oriole, which we have frequently heard uttered from its wooded retreat, have arisen the divers names bestowed upon this species in various countries. In Holland it is called Willewouw; in Italy, Rigogolo; in France, Lorient; by Bechstein its call-note is likened to the syllables *ye-puhlo*! All these appellations, although sufficiently different from one another in point of lettering, convey nearly the same sound to the ear when pronounced.

This species, although rare in England, is common at some periods of the year in different parts of Europe; it is found in the most wooded parts of Holland, and is still more abundant in Italy and France. In all these countries the Oriole is a migratory bird, which arrives late in the spring, and returns southward at the close of summer, or very early in autumn. In England, although of rare occurrence, many individuals are recorded to have been shot or captured alive at different times, and some instances have been authenticated of its breeding in this country.

Thickly wooded districts, and parks abounding in ancient trees, are preferred by these birds. They are usually seen alone or in pairs, and occasionally in small parties, consisting



24-10-17



of the parents and the young family. They are birds of shy and retired disposition, and are rarely seen beyond their wooded tract, where they are generally hidden among the thick foliage. Insects and various fruits, such as cherries, figs, olives, etc. constitute their food.

The nest of this species is singular in materials and construction, and differs from that of all other birds found in Britain. A specimen which we received from Suffolk was suspended from the forked branch of a tree, and is composed almost entirely of wool, interwoven and bound together with long coarse grasses and fine fibrous roots; it is about the size of the blackbird's nest, and of similar shape and depth, containing four eggs: this nest is remarkably light and very beautiful.

These birds begin very early their southern migration: they leave Holland and Germany in August: it is therefore probable that their journey being commenced so early, is continued to a very remote part of Africa, where they join their brethren of African descent, and other tropical birds.

The season of moulting also argues a very distant southern migration, as it takes place in February in caged specimens, from which we may naturally infer that in a wild state they pass through that change within the tropics, if not even in the southern hemisphere, where the seasons are in opposition to our own.

Caged birds of this species betray great restlessness at the period of migration during many weeks in spring and autumn. The song of the Golden Oriole is extremely pleasing; it is also capable of instruction in confinement. Young birds may be reared from the nest by feeding them on ants' eggs and other insects, raw meat well chopped, and occasionally bread and milk, but they require a great deal of care and attention.

Most of the specimens of this species recorded to have

been taken in England have been met with on the eastern or southern coast, but it sometimes penetrates more inland; we have ourselves seen it on Burwood Common, near Walton on Thames, in Surrey. This individual, a fine male in perfect golden plumage, was seated upon the branch of a tree by the road side; it was probably on its migration, or it would not have shown itself so openly: on being approached the bird flew across a field, where we had a full view of it, and finally eluded pursuit. In the same locality, we remember to have heard some years previously the call-note of this species, but were not able to get a sight of the bird.

The genus *Oriolus* of Temminck, which that author has separated from certain American species nearly allied, is thus characterised:—Beak in form of a lengthened cone, flattened at the base, laterally compressed near the tip; upper mandible nearly straight at the base, gently arched towards the tip, and bearing a prominent ridge along the upper line, toothed near the extremity; nostrils basal, lateral, naked, and horizontally pierced in a large membrane; tarsus shorter than, or equal to the middle toe; wings having the first quill very short, the second shorter than the third, which is the longest.

The Oriole measures about nine inches and a half in length, and eighteen in expanse. The tail is about three inches and a half long, the feathers nearly even at the end, and the wings, when at rest, cover three-fourths of its length. The beak is nearly an inch long, and about five lines broad at the base. The nostril oval. The colour of the beak varies from pale reddish-brown to dull black, according to age or sex.

The entire body of the adult male is brilliant yellow, including the head, neck, and tippet, the breast, and all the under parts. The wings and tail are black, with the exception of the tips of the spurious wing feathers, which are yellow, and of the terminal portion of most of the side fea-



52.



53.



54.

1. The first part of the document is a list of names and addresses of the members of the committee.

thers of the tail, which are also yellow ; the quill-feathers are narrowly bordered with white : the two middle feathers of the tail are black. A black line passes from the base of the beak to the eye. The iris is carmine-red ; the beak bright reddish brown. The legs and feet are ash-colour.

The female is olive-green on all the upper parts of the body, the under parts greyish-white, the shafts of the feathers dusky : flanks yellowish, streaked with brown. The tail-feathers are dark olive, those on the sides tipped with yellow ; the upper tail-coverts tipped with yellow. The wings and wing-coverts brown. The beak browner than in the male.

The young birds much resemble the female, with the addition of dark shafts to the feathers of the upper plumage ; their iris and beak are dusky.

The egg of the Golden Oriole is numbered 53.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LIV.

WHEAT-EAR.

SAXICOLA ŒNANTHE.

THE numerous family of the *Sylviadæ*, the last of the divisions of the *Dentirostres* previously mentioned, embraces nearly forty native British species, some permanently resident among us, some migratory. By various authors this large family has been as variously divided and subdivided, in accordance with their different views.

At the head of the *Sylviadæ* has been placed by some recent authors the genus *Saxicola*, on account of the affinity which its members have with the rock thrushes among the *Merulidæ*, and as forming a proper connecting link between that division of the *Dentirostres* and the summer warblers, of which the *Sylviadæ* chiefly consists.

Waste and barren districts, open downs and moors are the chief resort of most of the birds included in the genus *Saxicola*. They are lively, shy, and difficult of approach, except during the breeding season. Their food consists entirely of insects, which they take after the manner of the flycatchers, by darting upon them from the summit of a hillock, stone, or bush, or by pursuing them on the ground, which they are enabled to do with much celerity on account of their long and slender legs. All the species at present known are confined to the ancient Continent. The few



members of this family that are reckoned British, which are only three, are readily distinguishable by their peculiar manners. In form they are stout, and the shortness of the tail adds to that appearance; and their heads are rather thick and round; but their long and very slender legs, and the sprightliness of their actions, give them a peculiar character. They are continually flitting from bush to bush, or from stone to stone, and when alighting to rest and gaze about, the tail is continually in motion. They are birds of handsome and varied plumage, and the young and old, male and female, in spring and autumn plumage, all present different appearances.

The Wheat-ear is a summer resident in these islands, and although too local in its distribution to be called common, is yet, in many places, very numerously dispersed. In spring and autumn, the periods of their arrival and departure, they are found in immense numbers on some parts of the southern coast, especially in the counties of Dorset and Sussex: the greater part of these are supposed to be winging their flight to or from the northern parts of Europe, as they penetrate even beyond the limits of the arctic circle.

This species is much attached to barren, stony, and rocky wastes, and seldom seen in wooded or enclosed country, unless in the immediate neighbourhood of a heath or elevated moor. Their time of arrival in England is from the middle to the end of March, according to the season. A friend, writing from Suffolk, says: "Several pairs of Wheat-ears were observed to-day, March 30th, on the smooth declivities of Saxtead bottom. One solitary individual made its appearance on the 21st instant, during the late inclement snowy weather, but from that period not any more arrived here, or at least were not visible until this day, when considerable numbers were seen to frequent their favourite spot. It has been remarked, that these birds arrive as they depart,

one or two only in company, but in the above instance they evidently seemed to come in a body, since we have constantly looked for their arrival each day, even preceding the 21st, and none were to be found in their usual haunts." Montagu appears also to have entertained the same opinion, and he thus describes the arrival of a party from their passage across the Channel: "On the 24th of March, 1804, a vast number of these birds made their first appearance on the south coast of Devon, near Kingsbridge, in a low, sheltered situation, and continued in flock the whole of the day, busied in search of food: the flock consisted entirely of males, without a single female among them. For some time the wind had been fluctuating, and the weather cold, attended with hail and snow, for a day or two preceeding their appearance; and a strong gale of wind from the east obliged these birds to make a landing so much farther to the westward than usual in such numbers. The Wheat-ear is by no means common in Devonshire or Cornwall in the breeding-season, and never plentiful in either during the migrative seasons, but is most frequently observed on the fallow lands in the autumn."

In allusion to the peculiar localities chosen by this species, the friend before quoted says, "Wheat-ears are found partially dispersed on many parts of our heaths, but one spot in particular seems selected as their most chosen resort. This, their favourite valley, consists of a smooth grassy slope, the ground beyond rising abruptly in the opposite direction; it is much frequented by rabbits, and abounding with their burrows, so as to afford every facility for the convenience and peculiar mode of nesting adopted by these birds."

"The nest of this species is constructed of moss and grass, intermixed with wool, and lined with that material, or rather, if it can be obtained, with hair. The eggs weigh about forty grains." The nest is usually constructed in the recesses of a rabbit's burrow, or in a crevice among the rocks, and is often

difficult to find, and when discovered still more difficult to obtain. The eggs are usually six in number.

The Wheat-ear moves with a smooth and rapid flight; it is never seen to alight upon a tree, rarely upon a low bush or hedge; but generally rests itself upon a hillock or mole-heap, on a stone or embankment. It is a careful, and watchful bird, and when perched as just described, frequently turns its head to the right and left, when the black stroke which passes through the eye forming a horizontal line with the dark beak, forms a very distinctive character. It is continually on the alert, and on the least alarm flits away. It is only under cover of a hedge or bank that an observer can approach within a few feet of it.

The song of the Wheat-ear is varied, soft, and pleasing, and frequently continued uninterruptedly for a considerable time, and in the breeding season is sometimes uttered when hovering on the wing. When caged, it is said to sing almost throughout the year.

In Sussex and other counties, where these birds abound in such vast numbers at the periods of their migration, they are taken in traps for the table, and being at that time in excellent condition, are esteemed very delicious eating. In September they begin to retire from this country, and great numbers assemble on the downs of the southern coast for that purpose: nevertheless, stragglers are occasionally seen much later in the season, some having been noticed in November and December.

We have seen this bird in Surrey during the breeding season in various open situations suited to its habits, such as Box Hill and its vicinity, St. George's Hill, Burwood Common, etc., and on the open level plains also in Middlesex that border on the Thames we have observed large parties resting during their autumnal migration, at which time the greater part of them were in their autumn or rufous feathering.

The Wheat-ear is known in most countries of Europe, from the coasts of the Mediterranean to the arctic circle, but is most common in the temperate parts. Barren and uncultivated districts appear to attract these birds most; also open downs near the sea, on which latter account they are very abundant in Holland.

This species confines itself entirely to insect food, such as the many species of flies that abound on dry and heathy wastes, also grasshoppers, beetles, the larvæ of insects, etc.

These lively birds may be kept in confinement if care is taken to supply them as much as possible with insects, but in default of these, bread and milk, bruised hempseed, and raw meat have been found to answer the purpose. They require in other respects the same warmth and treatment as the nightingale.

The entire length of the Wheat-ear is six and a half inches: the wing measures three inches and a half, beyond which the tail extends about nine lines. The tarsus is an inch long, black, slender, and covered from the ankle to the feathered tibia with one plate, not divided into scales. The middle toe is nine lines, the side-toes little more than half that length, the outer one united half-way down to the middle toe; the claws are black, very slender and sharp; the tail measures two inches; the beak is five and a half lines from the forehead to the tip, and nine lines from the tip to the gape. The beak of this species is intermediate in form between the stoutness of the thrushes and the slenderness of the warblers; the upper mandible is slightly notched, much compressed towards the tip, and somewhat widened at the base, resembling the Muscicapidæ, and is, like them, furnished with a few stout bristles near the gape, and has a strong prominent ridge running along the upper mandible, and advancing upon the forehead. The wing has the first quill-feather about half an inch in length, the

second a little shorter than the third and fourth, which are the longest, and nearly equal in length.

The distinct and well-contrasted colours of the adult male bird of this species, in summer plumage, are disposed as follows: the head, mantle, and upper part of the back are fine bluish grey; the wings and wing coverts are black; the beak is black, and a narrow streak of the same passes from the nostril, skirts the eye above and below, and expands over the ear, above which a band of white crosses the forehead, and passes over the eyes; the chin is also white; the lower part of the back and upper coverts of the tail are pure white, as well as the side feathers of the tail for two thirds of their length, commencing at the base, the remaining third part being black; on the two centre feathers of the tail the black portion reaches higher up; the lower part of the breast, belly, and under tail-coverts are white, slightly tinged with yellow ochre; the iris is hazel; the eyelids, legs, and feet are black.

The autumn colouring of the adult male differs considerably from that of the spring. At the autumnal moult the white of the under parts is exchanged for bright rufous on the breast and sides of the neck, and pale rufous white on the chin, belly, and under-coverts of the tail; the grey of the upper plumage is obscured with brown, and the wing-coverts and tertials are broadly bordered with rufous brown, the tail-feathers are also narrowly tipped with pure white. These two states of plumage are represented in the plate, and the change from the autumn to the spring, or summer plumage, is effected by the gradual wearing away of the edges of the feathers, and by the effect of season on the bird itself, not by a vernal moult, as these birds cast their feathers only in the autumn.

The spring plumage of the adult female differs not very materially from that of the male; the black, white, and grey,

are, however, much less pure, and the dark streak through the eye brown, and not so well defined.

Young birds of the year in autumn very much resemble their parents when obscured by the autumnal moult, but the line over the eye is rufous instead of white, and the dark line through it very imperfect; the head, back of the neck, and mantle also have, at present, none of the grey feathering; they are chestnut-brown.

The egg figured 54 is that of the Wheat-eat.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LV.

WHINCHAT.

SAXICOLA RUBETRA.

THE arrival of this shy and timid bird in our country seldom takes place until nearly a month later than that of many of our summer visitors. According to the information of a friend, curious in such observations, its appearance on the coast of Suffolk varies from the 18th of April to the 6th of May, according to the season.

Whinchats are found dispersed generally, but not very abundantly, upon upland heaths and commons, and delight in warm, still, dry weather; but usually remain concealed in some sheltered spot, if the temperature is low, or the wind boisterous. They are more impatient of cold than many of our summer migrants; this is apparent by their late arrival, which is several weeks after the spring passage of the previous species, the wheatear.

In its actions this bird is light and graceful in a great degree. It perches usually upon the uppermost branches of the whin and furze bushes, and other low shrubs, with which the spots most frequented by it abound: in such a conspicuous situation it may be observed, seated for many minutes at a time, quite motionless, except when the head is turned to the right or left from time to time to watch for its insect food, or to observe whether any danger ap-

proaches. If followed, it takes flight, and skimming near the ground, again alights similarly upon the top of another bush a little in advance of the pursuer. Although usually shy, and flying from the approach of man, these little birds, during the time when they have young, either in the nest or just able to fly, are very fearless whenever their nest is approached, flying round and round the intruder, apparently in great agitation; it is, however, difficult to ascertain behind which bush or clod their treasure is secreted, as they are careful not to betray it by alighting upon the spot; we have frequently, on such occasions, sought for it in vain, although, from the restlessness and distress of the parent birds, we were quite certain that the little ones were not far off.

The form of this little bird is elegant, and the plumage of the adult male in spring is prettily varied with black-white, grey, and pale rufous: the dark horizontal line through the eye, the white streak above it, and the white spaces upon the basal half of the tail-feathers, are sufficient marks to render it readily distinguishable by even the inexperienced observer.

The food of this species, in a natural state, is almost entirely insects, such as flies, bees, beetles, caterpillars, &c., some of which are taken by darting upon them from a bush or bank, others are sought for and pursued upon the ground, which they traverse with lightness and celerity.

Arriving so late in this country, and departing proportionably early, it is probable that only one brood of nestlings is reared by the Whinchat during the year, although we have found its nest and eggs as early as the 17th of May. The nest of this species is usually built on or near the ground, either in the thick branches of a tuft of heath or furze, or among tall herbage, or concealed behind a clod of earth. Its component parts differ according to the locality

in which it is found. One of our specimens, which was taken from a low bank in a district of meadow land, is composed almost entirely of small tufts of dry grass, such as are usually to be seen scattered in meadows that are much frequented by rooks; a little green moss is interwoven externally, and a few cow's hairs are perceptible in the substance of the nest, but not disposed so as to form a lining: the whole constitutes a thick and elastic mattress of a flattish form, the cup, or hollow, of the nest being very shallow. This nest was not so well concealed as is usually the case, and the hen bird was surprised and taken prisoner with it, together with four eggs. Another of our nests is entirely different in the materials of which it is composed; these consist of green moss laid upon a foundation of a few dry stalks of heath; some skeleton leaves of the black poplar, whose stiff and seemingly unmanageable foot-stalks form the basket-work; and two or three long horse-hairs.

The eggs, which are from five to seven in number, resemble very much, in size and form, those of the redbreast; they are delicate greenish-blue, more inclining to green than those of the wheatear, and are always speckled more or less with pale orange-brown about the larger end. The young birds, in their nestling plumage, are mottled with grey and white, but when fully fledged they bear much resemblance to the adult female in autumn feathering.

One evening, in the summer of 1841, we watched for some time a young family of this species on Shepperton Range, a tract of open meadow land on the borders of the Thames, in Middlesex, a spot much frequented by these birds. The young ones had probably come out for their first flight, as we had not seen them previously, although the place was daily visited by us. They flew, by short flights, from bush to hedge, and from hedge to railing, fanning their short tails, and occasionally settling on the

ground. They were anxiously attended by the parent birds, who showed no disposition to leave them. We did our best to secure one or two of them, but although they could not fly more than a few yards in a flight, they were too nimble for us, and kept themselves safely out of our reach.

The flight of these birds is light and springing; and they hover with a quick motion of the wings, rising a few feet above the bushes, and singing at the same time their pleasing song. In a cage, their flight from perch to perch is light and noiseless, and performed with so quick a motion, that the wings, when in the act of fluttering, are not perceptible.

This species is met with in most of the temperate parts of Europe, where heaths and fertile districts abound, reaching, in summer, as far north as the centre of Russia. It is found in Norway, Sweden, Denmark, Germany, and France; in Greece, Italy, and Spain. In Switzerland it is very common, especially in fertile valleys that border upon Alpine districts; it even ascends the mountains to a considerable elevation, where the soil is well covered with verdure. In all these countries it is a summer resident only, and very early in autumn retires southward.

The adult birds are very handsome in plumage, especially the male in his full spring dress. The beak and the long slender legs are black, and polished like ivory, the base of the beak beset with bristles. The feathers of the whole upper plumage from the beak to the tail are dark brown in the centre, bordered on the head and on the lower part of the back with orange brown; the intermediate parts, including the back and mantle, have the feathers bordered on the sides with delicate grey. From the beak a dark line extends backwards, covering the ears; above the eyes, and extending to the nape, runs a line of pure white; another narrower line of white passes from the corner of the mouth down the side

of the face, separating the dark ear-coverts from the delicate pale orange of the throat and breast ; the rest of the underparts are pale buff. The entire wing is of dark brown feathers, bordered with orange-brown, with the exception of some of the greater coverts towards the body, which are pure white ; another patch of white occupies the base of the coverts of the primary quills. The tail, which is very short, and extends less than half an inch beyond the wings, has the basal half of its feathers white, the terminal half dusky, bordered with pale brown.

The female bears much resemblance to the male in the distribution of her colours ; the different tints are not, however, so pure and distinct, and the white patches are of less extent.

The young birds are far inferior in beauty to the adult in spring ; they have neither the white lines and patches, nor the well-defined dark band through the eye, nor the beautiful grey upon the back ; their entire upper plumage is dull yellowish-brown, streaked longitudinally with dark brown, the tips of many of the feathers paler ; the ear-coverts are pale and ill defined, and the streaks above and below them dirty brown ; no white is yet to be observed upon the plumage, except at the basal part of the feathers of the tail.

The length of this species is a little more than five inches. The wing, from the carpus to the tip, measures two inches seven lines ; the first quill-feather is less than an inch in length ; the third and fourth are nearly equal, and are the longest in the wing. The tarsus measures about nine lines, the middle toe the same ; the claws are long, slender, and remarkably sharp. The beak is four lines from the forehead to the tip, and seven from the tip to the gape.

The egg of the Whinchat figured in our plate is No. 55.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LVI.

STONECHAT.

SAXICOLA RUBICOLA.

THE STONECHAT is one of our handsomest indigenous birds, when dressed in spring in its well varied and conspicuous plumage. An inhabitant, like the preceding species, of commons and heathy wastes, this pretty little bird enlivens those quiet and lonely spots, not only with its attractive plumage, but with its singular note, whose sound resembles exactly the noise made by striking two small stones together, and cannot better be expressed in letters than in the trivial name "*Tschecantschia*" of Gmelin. Like the whinchat, which it resembles greatly in its habits and manners, it is usually seen upon the uppermost spray of a bush, or clinging, as represented in the plate, among tall rushes. It is not a shy bird; and, being much more able to brave the cold than the two *Saxicolus* just described, it may be seen at all seasons and in all weathers, and often in rough weather in summer is the only small bird upon an extended common that ventures to oppose its little bosom to the gale.


The flight of the Stonechat is rapid, but not usually prolonged. It may be seen sitting for a few minutes on the top of a bush, then suddenly disappearing, again presents itself at some little distance in a similar position. This appearance and disappearance is caused by its winging its flight close to



1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

the ground, and again rising to gain the elevation of a low bush or bank, thus tracing in its flight inverted arches ; but if disturbed when it has nestlings, it flies higher, and with a more continued flight. This we observed one evening to great advantage, when we accidentally intruded ourselves upon them. It was in a small sheltered valley among the hills, whose sides were covered with heath and brakes. We had no sooner sat down to enjoy the beauty of the evening, than a pair of these birds hurried past us in much agitation, uttering notes that were doubtless understood as signals of alarm by others of their species. Presently, another and another pair took wing, and hurried about the little valley, testifying by all their actions great disturbance and distress. We had entered the place to watch the evening sports of the nightjar, quite guiltless of any intention of molesting or disturbing these pretty birds, and were much interested in their proceedings. As the gloom of evening deepened, we could only perceive them, as they flew hastily past, somewhat above our heads, by the white patches upon their plumage, which, contrasted with the dark sides of the valley, shone out in the gloom. As long as we remained there they took no rest, but continually passed and repassed us, sweeping to the end of the valley and returning, plainly pointing us out as the causes of their distress.

Although the vicinity of their nest is generally thus betrayed by the Stonechats, it is nevertheless difficult to find, as it is very closely concealed, and the birds never visit it when they think themselves observed. The nest is constructed either on the ground beneath a bush, or tuft of heath, or in the centre of a close whin-bush, and well concealed. We have met with it in the latter situation ; and should have been unable to find it had not one of the old birds flown out on our approaching the bush hastily. The sight of the bird induced us to look for the nest, which was



not found until after a considerable search, and much annoyance to our fingers, so well and deeply was it concealed : it was about two feet from the ground, and contained four eggs. This nest was composed almost entirely of green moss and roots, laid upon a rough foundation of dry twigs of heath.

The nest of this bird is, however, mostly built of short tufts of dry grass, fine and loose roots, and other disjointed and very anomalous portions of vegetable rubbish, together with a few horse-hairs ; it is a rough and loose structure, and when complete has neither lining nor border. In all the nests we have seen of this species where horse-hairs were present, they have been singularly made use of, not being employed as a lining, but either woven into the loose substance of the nest, or used outside to bind the whole together, being, in fact, the most substantial material employed. But in denying the Stonechats the praise of skill in the architecture of their nests, we cannot but admire their industry in accumulating so large a quantity of materials together.

The eggs of this species, which vary from five to seven in number, are generally smaller than those of the whinchat, more pointed in form, and more polished in substance. In colour they are usually light greenish-grey, blushed over with a tinge of reddish brown, which consists of minute spots most obvious at the larger end, where they sometimes form a distinct zone.

The young birds in their first, or nestling plumage, are mottled with greyish-white.

The food of the Stonechat consists chiefly of insects, aerial and terrestrial. In the autumn they eat caterpillars, and in winter frequent springs and the borders of rivers, where insects are usually to be found.

These birds roost upon the ground, and are sometimes taken by bird-catchers in their nets. When first taken prisoners, their wings should be tied together at the tips

to prevent their fluttering violently about, or they will exhaust themselves with their angry endeavours to escape. Not many succeed when taken full-grown: it is better to rear them from the nest, which may be done with care: they require to be fed in the same manner as the wheatear.

The entire length of the Stonechat is five inches and a half. The beak measures four lines and a half from the forehead to the tip: it is black, and furnished at the base with bristles: the eyelid is black, the iris dusky. The whole of the head and neck are black: a patch of pure white occupies the space between the ear-coverts and the shoulders: the greater coverts of the tertials are white, as well as some of the upper coverts of the tail. The rest of the upper plumage is black, bordered with rust-colour, the quill-feathers of the wings and tail the same. The breast is rich, bright rust-colour, becoming lighter towards the belly and under tail-coverts. The tarsi measure eleven lines; these and the toes are black and polished, the claws very sharp. The wing measures from the carpus to the tip two inches eight lines: the first quill-feather is less than an inch long, the second four lines shorter than the third and fourth, which are the longest. This is the description of the adult male in its summer feathering.

After the autumnal moult the black feathers of the head and neck are bordered with a fringe of rufous, which is still broader upon the feathers of the back and scapulars, and the breast is not so intense in colour.

The female has the upper parts of the body brown, bordered with yellowish rust-colour: the throat is dusky, intermixed with white and black. There is a white spot, as in the male, upon the greater coverts of the wings, and also upon the side of the neck. The under parts are brownish-rufous, darkest upon the breast.

The egg of the Stonechat is figured 56 in the plate.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LVII.

REDBREAST.

SYLVIA RUBECULA.

THE warblers upon which we are now entering are, without doubt, the most interesting of all the feathered tribes, and the most general favourites on account of their pleasing and lively manners, and their various and delightful powers of song. In summer all nature is full of them. Some species inhabit our gardens: others, less familiar, confine themselves to the tufted banks of brooks and rivers: many reside chiefly on the skirts of woods and heaths; and a few penetrate into

the recesses of the forest. Everywhere we find these lovely and gifted little creatures; everywhere the ear is charmed with their melody, or the eye gratified by the sight of their light and graceful forms. They differ much in habits, locality, and manners. Some thread their nimble way hardly perceived through the thick and tangled hedge; some climb among the reeds and osiers; some are seen swelling their little throats as in ecstasy they pour forth notes of gladness; and others, unseen, warble their delicate and varied song from a close and quiet shelter. Many of the members of this interesting family are familiar in their approaches to us, building their nests and bringing up their young within our sight; while others are little known but to the naturalist, who seeks them in the retired spots to which their instinct leads them for security. Some of these little



Pl. 57.



vocalists sing during the night, others only in the day, each, in its appointed time, joining in the unceasing chorus of Nature; and when the greater number leave our climate in autumn, to seek a milder temperature, a few remain to cheer our leafless gardens. To the lover of nature all these changes are endless sources of the purest pleasure, and subjects of the most delightful investigation, to which the diligent seeker of worldly pleasure can find no equivalent.

The *Sylviadæ* have many generic characters in common in their external formation; but, on account of slight variations in form, and differences of habits and manners, this large family is by most systematists subdivided into several sections, which will be mentioned in their order. The generic characters usually assigned to the *Sylviadæ* are as follows:—Bill straight, slender, and almost round, higher at the base than broad: nostrils placed near the base of the bill, oval, and partly closed by a membrane. Tarsi usually longer than the middle toe; the outer and middle toes connected: the claw of the hinder much arched, and shorter than the toe. Wings of middle size; the first quill-feather short or wanting, the second a very little shorter than the third. They bear much resemblance to the thrushes, except in size. The birds of this family are lively and nimble, but unsociable, even among themselves. The male birds are possessed of the power of singing, in a manner more or less agreeable. Their food consists of insects and their larvæ, berries, and worms. They breed in woods and forests, on or near the ground, in thickets and reeds, in holes of trees or rocks: they have one brood in the year, at most two. They deposit from five to seven eggs, which are hatched in a fortnight. The young desert the nest early, and even before they can fly. In the Redbreast, genus *Erithaca* of Swainson, the bill is rather strong, furnished with a few bristly hairs at the corners of the gape: the

nostrils nearly covered by hairs projecting forwards. The claws are very blunt, plainly indicating that it passes great part of its time upon the ground.

The Redbreast is remarkable for its familiarity and confidence, its liveliness, and the beauty of its untiring song. Of all our small birds it is the most interesting; its enchanting grace, its sociability and confiding dependence upon our good will, claim for it the first place in our affections, which, indeed, it generally obtains. In the qualities of its song some few birds may rank above it, such as the Nightingale and Blackcap, but the Robin enlivens us at all seasons, not only in the height of summer, when all nature is joyful, but, in the most dreary and gloomy days of November and December, when other birds are mournful and silent, this sweet warbler may sometimes be heard to pour forth his plaintive melody, as if to bring more forcibly to our minds that he is the best friend who is faithful in adversity.

In a natural state, the Redbreast sings the whole year, except during the time when the young nestlings require close attention: this period is no sooner past than its song is recommenced, and is not again relinquished until another year brings with it a recurrence of the same duties. The song commences in the morning with the earliest dawn, and is often heard late in the evening, especially in the latter part of summer, until nearly dark. We had a caged Redbreast, a great favourite, which always began to sing in the evening, as soon as the candles were brought in. If there was music, of which he was particularly fond, he would sometimes sing so loud that we were obliged to throw a covering over his cage, in order to keep him quiet. At other times, when not excited by rivalry, his voice was soft and delightful, and sometimes so low as to be inaudible at the distance of a few feet from the cage. The Redbreast, when caged, is very wakeful, and can seldom be surprised with its head behind its wing.

Although so friendly with man, this bird is generally unsociable with individuals of his own species, whether at large or confined in a cage: under both circumstances, they are frequently seen to fight. We have, however, found the Redbreast very peaceable when confined with small birds of different species, and have frequently kept him in a cage with nearly twenty others. It is supposed, also, that, in migrating, Redbreasts travel singly, as they have occasionally been seen alone at some distance from land. In a communication from the Rev. E. J. Moor, that gentleman says: "A young naval friend of mine (Mr. R. Burroughes) told me that as his ship was once in the Bay of Biscay, at a considerable distance from any land, a common Robin Redbreast was picked up one morning on the deck, weak and wounded; it had been driven against a mast of the ship in the night, which was rough and squally. The bird was attended to, and recovered, and continued with the vessel until she reached Bengal, where it was taken to land and liberated. It used to fly about the rigging, and come down on the deck to be fed. Mr. Burroughes added, that it was highly curious to see the Robin preparing to shelter itself about the different parts of the rigging, &c., upon the approach of any coarse weather."

Although very sensible on most other subjects, these birds very readily fall into a snare or trap; one is no sooner caught than all the Redbreasts within hearing come around to see what is the matter, so unbounded is their curiosity; and one after another may be caught in the same manner by leaving one bird in the trap-cage to allure the rest. But although it falls into a snare with such incautious precipitation, the Redbreast is not so easily accustomed to a cage as many other birds; and, unless taken at a suitable season of the year, flags and dies after a few days' captivity. It bears the loss of its liberty best in the winter; and we have kept individuals taken

at that season for years. In a cage, it is the most interesting and sensible of all birds ; it is always active and lively, and watchful of all that passes. If a new bird is put into the cage, or aviary it inhabits, the Robin is the first that takes notice of it, and immediately approaching, utters its note of surprise, bows repeatedly with its peculiar dipping motion, erects its tail, and in various ways endeavours to express its interest or surprise. Its attention is particularly directed to young nestlings, either of its own or other species.

The food of this species consists of insects of all sorts, and earthworms, of which they devour great quantities ; these are sometimes shaken or beaten till motionless, but often swallowed alive ; elderberries and blackberries are also eaten with much relish. Beetles and earwigs are likewise a favourite food ; the former are held in the claw, in the manner practised by the hawk tribe, and picked in pieces, having previously been twitched and tossed about until apparently dead. After eating food of this kind, Redbreasts cast, or throw up, the indigestible remains, such as the elytra of beetles, the

wings of flies, etc. A young friend once informed us that, walking in a road enclosed with trees, he had observed one of the large beetles, commonly known as the stag beetle, sailing in the air across his path ; suddenly, a Redbreast darted towards it, and the two creatures met in the air, and by the force of the shock fell together to the ground. The young narrator said he watched them for a few moments struggling together upon the ground ; when, fearing for the life of the Robin from the formidable jaws of such an adversary, he could not help running towards them, upon which the Redbreast flew off. The collision might have been accidental, but from the well-known boldness of the Redbreast, and the circumstance of his being sufficiently at liberty to fly off when approached, it would appear as if he had been the aggressor, and had met this formidable insect with deadly intentions.

Our island appears to be the most northern country in which this species remains during the winter. In Saxony, which is in the same parallel of latitude as our most southern counties, these birds are only summer visitors, arriving in March and departing in November, never remaining the whole winter with impunity.

That some Redbreasts of northern origin pass the winter in this country, we have long thought probable, from the great increase to their numbers which is generally to be observed as soon as the cold weather sets in. At the present season, November, when our gardens and orchards are more frequented by Redbreasts than at any other period of the year, we have listened with surprise to the great numbers that may still be heard singing in the open country. On the 14th of this month, a day warm and fine, but which had been preceded by a short period of cold weather, we were strengthened in the belief that our native Redbreasts are sometimes joined by a foreign migration, by listening, in a well-wooded district, to the innumerable songsters of this species that were to be heard all around. The day was still and warm, and their little voices could be heard from a great distance, from tree, and hill, and valley, as they answered one another in joyous response. Why should they not in this country as in others obey the great law of nature for their comfort and preservation, and why should not England serve as a winter asylum to many of this species that have been reared more northward? Especially as there appears something in the climate of England congenial to these birds. Probably the cause may be referred to the constant changes in the atmosphere, which prevent the temperature from continuing very low for many days together.

The Redbreast begins to breed early, nearly as early as the hedge-sparrow, and often while the snow is still upon the ground. The same memorandum in a friend's manuscript

journal, dated April the 7th, records: "A heavy snow storm at six o'clock in the morning," and "a Robin's nest in the garden, with young ones."

The nest of this species varies as much in the materials of which it is composed, as in the situation chosen. We have one taken in the month of April from the interior of the roof of a cow-shed, after the young birds were flown, which is almost entirely constructed, within and without, of cows' hair, of a rufous, or reddish colour; a very little green moss can be detected interwoven in the foundation, together with a few roots. The whole has the most singular appearance, and bears no resemblance at all to an ordinary Robin's nest. Another of our specimens, formed of the materials most in use with this species, is chiefly composed of green moss, bound together with leaves of the holly and black poplar, both in the beautiful reticulated or skeleton state, and the inside is lined with delicate white roots, and a few horse-hairs. This is as usual a large and rather deep nest, and its substantial sides are not less than two inches in thickness: it contained when brought to us seven eggs. The eggs of this species are oval in shape; in colour they are yellowish-white, speckled with brownish or Venetian-red, chiefly at the larger end.

The Redbreast is generally diffused throughout England, wherever wooded country abounds, or fields, hedges, plantations, gardens, or enclosures of any kind are to be found. In all these different localities this bird is to be met with at most seasons, and in such places it rears its young. If the locality chosen for its nest be a garden, the site selected is usually a hidden corner in an ivy-covered wall or thatch. If it be in the open country, a mossy bank, or a stump covered with evergreen foliage, is preferred, or a crevice in a rock where fern and tangled roots can serve for shelter or concealment.



For Falcons
- 2012 - 2013



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57.



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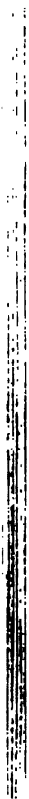


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INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LVIII.

BLUE-BREASTED WARBLER.

SYLVIA SUECICA.

THIS beautiful warbler is a regular summer visitor on the Continent of Europe, where it is found in some parts in tolerable abundance. It arrives from Africa early in spring, and, spreading over the European continent, penetrates as far as the north of Russia, Finland, Lapland, and Sweden. It is also abundant in Italy, and in the mountainous districts of France. But the western coast of Europe appears less frequented by this species than other parts, since it is not common in the western parts of France, nor in Holland, and it is said not to be met with in Denmark. The fact of this species being more or less scarce upon the western coast of Europe, may account for the extreme rarity of its appearance here, where only two specimens are recorded to have been taken.

Although widely dispersed in Europe, this bird appears to be rather locally disposed. By Bechstein it is spoken of as being seen in great numbers in its spring and autumn passage through Thuringia; but very few remain there to breed; while in other parts of Europe, both north and south of this latitude, they are known to rear their young. According to this naturalist, the migration of the Blue-breasted Warbler is performed in large flights. They pursue their course along

low grounds, frequenting the margins of streams and low damp meadows, and frequently, if a return of cold and snow overtakes them on their passage, they approach dwellings and farmhouses in search of food.

From Greece, Italy, and Spain, these birds are found, in summer, as far as Lapland; but, except during their migratory passage, are nowhere very plentiful, or their habits chiefly confining them to retired and unfrequented places, render them seldom seen. They arrive in Europe towards the end of March, or the beginning of April, the males always preceding the females by about a week, and begin their departure in August, or September, when they are believed to travel chiefly by night, and alone.

The localities most frequented by these Warblers, on their first arrival, are rivulets and swampy pools, marshes interspersed with willow and alder, and other aquatic trees, or abounding in reeds, flags, and rank herbage. In such places they conceal themselves so effectually, that, except by a very attentive observer, acquainted with their habits, they are rarely seen, especially after the leaves are fully come out upon the trees. Occasionally, the male may be observed sitting, for a few minutes at a time, singing among the upper branches of a low tree; but he does not long remain thus exposed, but, quickly descending, seeks again the shelter of the reeds and underwood. It is in situations of this description that the Blue-breasted Warbler passes the early part of the summer, in which also it breeds. Its nest is always built either on, or very near the ground, but, on account of the swampy or marshy nature of the locality usually chosen, it is always difficult to find, and sometimes inaccessible. It is mostly constructed among the remains of decaying herbage, fallen rushes, or tangled roots, sometimes partly concealed in a hole among broken ground. The nest is much like that of the redbreast, composed externally of dead willow leaves

and stalks, green moss, and dry grass or reed tops, lined with horse-hair, or the white down of cotton grass. The eggs are very beautiful, the shell thin and delicate, and of a bluish-green colour, and are nearly round in form, resembling much those of the pied flycatcher; they are five or six in number. The male frequently assists the female in the task of incubation, and never wanders far from the spot, but sometimes, by his presence and his song, betrays the vicinity of the nest. The young birds, before they are able to fly well, flutter along the ground, and at that time much resemble the young of the redbreast. The Blue-breasted Warbler breeds early, the first brood being sometimes on the wing by the end of May.

By Selby, Yarrell, and Temminck, this bird is placed among the Redstarts, but, judging from its form and appearance, it would seem to have more affinity to the redbreast and the nightingale. In its manners, also, it has numerous and striking points of resemblance to these warblers, although in its habits it is rather less sylvan and more aquatic. This species never frequents thick woods, nor is it found among tall trees, except in the immediate neighbourhood of water; it, however, inhabits, according to Temminck, the underwood on the skirts of the forests that abound on the continent where this bird is most plentiful. Its food is chiefly sought on the ground, and consists of terrestrial insects, small aquatic beetles, with their larvæ and chrysalidæ, also the larvæ of gnats, which are sought in mossy swamps.

As autumn approaches, the Blue-breasted Warbler is seen to draw nearer to inhabited and cultivated districts, and to seek, in potatoe, bean, and cabbage fields, the insects that are to be found in great plenty in such localities; but even when brought near, by necessity, to the neighbourhood of man, this species is little seen, owing to its retired and shy habits, but quietly seeks its food, which consists, at that

time, of caterpillars, slugs, worms, &c., under these sheltering plants, and its presence is often not perceived until in the act of flying off.

In its habit, therefore, this species appears much to resemble the redbreast; it is also as solitary in the summer, and as pugnacious, never allowing one of its own species to intrude upon its established haunts. Its flight, also, exactly resembles that of the redbreast, performed near the ground, and consisting of jerks, or springs, caused by the successive expansion and closing of the wings. When on the ground, this species stands very upright, in the manner of the nightingale, displaying its breast; it hops very quickly, then runs a few steps with its wings lowered, and tail erect, and hops again; in running, it moves its legs with a motion so quick that the eye can hardly follow.

The song of this species, although sweet and pleasing, is much inferior to that of the nightingale or redbreast: some of its notes are said, by Bechstein, to resemble those of the wagtails. It is often heard to sing during the night. Its call is *tack-tack, feed-feed!* When caged, it is a lively and sociable bird, and readily attaches itself to man.

In manners, this warbler appears to be very engaging. "Its beauty, sprightliness, and sociability," says Bechstein, "unite in rendering the Blue-breast delightful. Its agreeable song," he also mentions, "sounds like two voices at once; one deep, resembling the gentle humming of a violin string, the other like the soft sound of a flute."

This species is fond of bathing, and, in that exercise, drenches itself completely, like the redbreast; it has been observed never to bathe until the afternoon. It has a peculiarity in roosting that more resembles the habits of the larks than those of the warblers, namely, that it always sleeps upon the ground.

When caged, this bird requires the same food as the

nightingale, and other delicate warblers; also ants' eggs, meal, and earth-worms. Its quarrelsome disposition is shown when caged with another of its own species, in their continual battles, which, if not interrupted, would certainly end in the defeat and death of one of the combatants.

It is probable that this, and many other species of our warblers, in pursuing their vernal and autumnal migrations, follow the course of large rivers, on account of the numberless insects, both aquatic and terrestrial, that are to be found upon their shores, and along the banks of the tributary streams that join their course. Those, especially, that travel early, such as the Blue-breasted Warbler, and the redbreast, must find such a route highly favourable to the satisfying the first demand of nature, that of food. Accordingly, we find Provence, Lorraine, and Alsace, mentioned as visited in great numbers by the Blue-breasted Warbler and the redstart, and other summer birds, in the course of their migratory passage. This tract of country having, through its centre, the Rhone, the Rhine, and the Moselle, and being bounded on the eastern side by the mountains of Switzerland, and on the west by those of Languedoc, Burgundy, and Lorraine, leads from the Mediterranean directly into the heart of Europe, where these birds are seen in greater numbers, especially during their seasons of migration, than in any other part of Europe, and from whence they may speedily attain the northern countries they are known to frequent.

The entire length of the Blue-breasted Warbler is five inches and a half: the beak measures four and a half lines from the forehead to the tip, and seven lines from the tip to the gape. The wing measures nearly three inches from the carpus to the tip; and the tail extends, beyond the closed wings, one inch. The tarsus is an inch in length, and the middle toe seven lines and a half.

The male, in adult plumage, has the whole upper parts,

including the two middle feathers of the tail, hair brown, with a cinereous tinge; the secondaries, tertials, and coverts of the wings, edged with a lighter brown. The lower region of the eye, and the ear coverts, are dusky, intermixed with rufous. Beautiful azure blue feathers, like the plumage of the humming birds, cover the throat, neck, and breast; in the centre of which is usually a small spot of pure white. On the lower part of the breast this fine blue colour is succeeded by a line of black, and another narrower line of white; these are followed by a broad band of a rusty maroon colour. The flanks, belly and under parts, are pale brownish buff. The external feathers of the tail are rufous, at the basal end, and dusky at the terminal portion. The legs, are yellowish flesh-colour, the toes and claws inclining to dusky. The iris is brown; the beak is dusky at the tip, the basal part, and corners of the mouth, yellowish, and beset with bristles. Over the eye is a pale brown line.

The female has little, or none, of the fine blue that distinguishes the male; her throat and upper part of the breast are dirty white, bordered, on the sides of the neck, by a line of dark feathers; on the lower part of the breast, the feathers have a slight tinge of blue, with a dark mark in the centre of each, forming a kind of gorget. A yellowish white line passes over the eye, and encircles the ear-coverts, which are streaked with buff, and dusky. The upper plumage, wings and tail, are much like those of the male.

The young of this species differ much from the adult. Their upper plumage is dusky, with oval spots of reddish brown along the shafts of the feathers. The feathers of the wing are bordered with pale brown; the under plumage is of the same dark colour, with similar oval spots of pale brown. The breast of the young male bears an indication of the white spot, peculiar to the adult, in a pale brown mark. The under tail-coverts are whitish; the beak, tail, and legs, nearly as in the adult.

An opinion prevails with Temminck, Meyer, Nilson, and some other naturalists, that there exist two distinct varieties of the Blue-throated Warbler; one of these is the species above described, from which the other differs constantly, in having a rufous, instead of a white spot in the middle of the breast. This latter variety, with the rufous speculum, is considered by Temminck to inhabit, chiefly, the most northern of the countries above mentioned: the other, or the species with a white speculum, as chiefly inhabiting the warmer parts of the Continent, and rarely penetrating further north than Denmark.

The egg marked 58 is that of the Blue-breasted Warbler.

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SYLVIADÆ.

PLATE LIX.

REDSTART.

PHÆNICURA RUTICILLA. (SWAINS.)

THIS lively and graceful little bird and its congener, usually known by the name of Tithy's Redstart, are the only two of the genus *Phœnicura* known in England. They differ much in manners and habits from the members of the *Sylviadæ* that precede and follow them, principally in the localities chosen in which to rear their young, and in their actions. But in these particulars in which they differ from other birds they strikingly resemble each other.

The species under present consideration arrives in England about the middle of April, rather later than the nightingale. On their first arrival they may be heard singing their brisk and lively song of invitation to their expected mates, but after a few days, or perhaps weeks, thus spent, they apply themselves to the more important duties of the season, namely, the construction of their warm and sheltered nests, and the care of their rising offspring. It can hardly be said that the Redstart confines itself to localities distinguished by any particular feature; they are neither strictly sylvan, like the nightingale, nor aquatic, like the bluc-throated warbler, nor altogether delighting in rocks and buildings; but they appear rather like the redbreast, able to accommodate themselves to all these circumstances, and to





be in all equally at home. For instance, with regard to the locality chosen for its summer residence, this bird is frequently seen to make choice of a wild and retired situation among over-hanging cliffs, partly covered with vegetation, and interspersed with wood, where it appears so shy, that but a momentary glance is obtained of its form, as it hastily retires from observation. Having observed this, we can hardly believe that it is the same bird that builds under the eaves of inhabited dwellings, and even becomes so familiar as to breed fearlessly in little boxes or jars placed against a cottage wall for that purpose. Their familiarity is not, however, by any means equal to that of the redbreast, as they never enter dwellings like that bird, neither do they trust themselves much nearer to us than the edge of the roof or the top of the wall. But whether the Redstart locates itself in towns or villages, or chooses the greater retirement of woods and forests, it still keeps itself at a similar elevation from the ground, being usually seen upon the higher part of the selected house, or wall, or pollard tree. This bird is not, we believe, found in open, barren country, nor in spots entirely destitute of wood. Among trees, pollards appear to be most attractive to them, especially old pollard willows, as affording, in their decaying cavities, the sort of shelter in which these birds delight; and also because they conceal, in the crevices of their wrinkled bark, innumerable larvæ and insects suitable for food.

The Redstart builds in various localities, but the nest is always more or less concealed and sheltered in all; a hole in an old mossy or ivy covered wall is sometimes chosen, or a cavity in a willow tree: and so necessary does accommodation of this sort appear to the habits of the Redstart, that Selby considers the decrease of this species, in Northumberland, attributable to the substitution of hedges for stone walls, and to the removal of many aged trees, through the greater

attention that has latterly been bestowed on the management of wood. But the chief peculiarity in the breeding arrangement of the Redstarts is in their choosing, very frequently, for the receptacle of their nest the eaves of houses. To such a place they are known to return, year after year, if unmolested. A nest thus situated, is placed beneath the tiles, among the rafters of the roof, to which access is had through a broken tile or orifice, made by that friend to the tile-mender, the strong-billed and mischievous house-sparrow. In a place like this the nest is sometimes placed as far in as the arm can reach, and so devoted is the mother bird to the care of her eggs, or nestlings, or so confident in the security of her position, that she will suffer herself to be touched by the hand before she attempts to fly off, and when flown will not retreat beyond the roof that shelters her treasures. The young birds of this species are almost entirely like the young of the red-breast; but can be distinguished from them when flying from hedge to hedge by the rufous colour upon the tail, which shows plainly when the little wings are spread in flight.

The nest of the Redstart is composed of grass and moss, lined with feathers and hair: the eggs are six or seven in number, of a clear bluish-green, and in form oval.

The song of this bird is sweet, and its organs appear very flexible, as it is said readily, even in a wild state, to imitate the notes of other birds. It sings chiefly morning and evening.

The actions of the Redstart are quick and lively; he usually appears timid, and frightened, and continually shakes his tail.

The food of this species, which consists greatly in the larvæ of insects, is sought for among old trees, walls, and buildings; also in old mossy orchards, etc., etc. Besides insects, and their larvæ, these birds eat elderberries and other

fruits. Bechstein cautions bird-fanciers against giving them earth-worms, as they are hurtful to them when caged ; but, according to Sweet, they are fond of common maggots and meal-worms.

This delicate bird penetrates as far towards the north as Siberia, and is found eastward to Japan ; in all intermediate countries, we may presume, it is also to be met with in suitable localities, but it is nowhere very numerous or common. It is said to be heard in Germany as early as the end of March, some weeks before the usual period of its arrival here, which agrees with our supposition before mentioned, that the greater part of our migratory warblers, which pass northward in spring from Africa, first penetrate through the valleys of the Rhone and the Rhine to the heart of Europe, and thence disperse in all directions, where the climate, and the necessary supplies of food, invite them. With us this bird is seldom seen before the second or third week in April, and begins its southward passage again in August, or September.

Towards autumn these birds may be seen, accompanied by their young family, but it is the general impression that the young members of this species, and of other small birds, do not migrate with the adult, the parents preceding the young birds by a week or two.

This bird appears more common in the eastern than the western parts of England. In Suffolk, we have observed it to be tolerably common, but it is less so in Surrey and Middlesex, although, in both counties, we have seen it in villages and roadside hedges, and also in a retired and beautiful acclivity, covered with trees, which rises from the banks of the river Mole.

The chief distinguishing characters of the genus *Phœnicura* are : “ bill slender, as broad as high at the base ; rictus nearly smooth ; tarsi moderate ; wings rather long, the third and

fourth quills the longest ; tail even ; the feathers obtuse, and generally rufous." (*Jenyns.*)

The Redstart measures five inches and three quarters in length, and nine and a half in expanse. The beak is four lines and a half from the forehead to the tip ; the legs are slender ; the tarsus, which measures about an inch, is covered with a single plate, or scale ; the toes are armed with very sharp claws.

In the adult male, in spring, the forehead, orbits, ear-coverts, throat, and breast, are fine black, and a small patch of pure white occupies the fore part of the crown of the head. The rest of the head, back, and scapulars are fine blue grey ; the wings and wing-coverts are hair brown, with paler margins to the feathers. The two middle feathers of the tail are, in some specimens, brown, in others rufous, tinged with brown along the shaft ; the tail-coverts and outer feathers of the tail are rusty red ; the breast is bright rust red, lighter towards the belly, which is white ; the under wing-coverts are beautiful rust red. The legs are reddish black ; the iris brown ; the beak black at the tip and yellow at the corners of the gape.

In the adult male in autumn the upper plumage has brownish-grey borders ; and the feathers on the under parts, including the throat, breast, and cheeks, are so broadly edged with pale brown fringes that the primitive colours are almost hidden by them.

The female has the entire upper plumage greyish-brown, the under plumage reddish-white ; the back and tail as in the male ; the chin and throat are white, the breast shaded with brown.

The young birds, before their moult, have the upper plumage olive-brown, clouded with black, and spotted with rust-yellow ; the throat yellowish-white, spotted with blackish grey ; the tail and wings are darker than in the adult,

and bordered with rusty-brown ; the base of the beak is flesh-coloured, and the corners yellow. They may be distinguished from the young of the nightingale by their darker legs.

The egg of this bird is figured 59.

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SYLVIADÆ.

PLATE LX.

TITHY'S REDSTART.

PHŒNICURA TITHYS.

THIS Redstart is scarcely so widely diffused in Europe as the preceding species, since it does not, except very rarely, extend its western migration so far as our own islands, and its northern boundary is limited to the centre of Sweden, where it is considered an uncommon bird. It inhabits many parts of the middle of Europe, and of Asia. It is a truly Alpine bird, and is, consequently, common in Switzerland, which appears to be a country particularly adapted to its taste. It is found there above the region of vegetation, and bordering on that of eternal snow. It has even been known to remain in Switzerland the whole year in sheltered valleys, if the season has been sufficiently mild for the springs to remain open.

In countries of a less Alpine character, this bird contents itself with dwelling among high rocks and cliffs, blocks of stone or granite. In mountain districts it is very common in towns and villages: it is seldom seen in forests or woods, seldomer in low and marshy countries, except during migration; it is, consequently, rare in Holland.

In towns and villages on the Continent this species is much more common than our Redstart is here; and seeks the most elevated parts of towers, houses, churches, and



ruins ; whence it continually pours forth its lively song, which, beginning with the dawn, hardly ends with daylight. Its vocal powers are said to be far inferior to those of the common Redstart, both in quality and compass.

This little bird is restless and shy, and although seeking inhabited places, such as cities and towns, appears to do so more on account of the elevated objects such places afford than from any sociability of character, as they never descend from their elevated station, nor appear even in crowded cities to take much notice of, or to be at all molested by, the noise and bustle below.

The spring and summer are passed by them in these lofty abodes ; and in such places of concealment and safety as rocks and edifices afford, they bring up their young families. To this mode of nidification the present species of Redstart is even more attached than the former one, and its nest is more commonly deposited among the broken walls of a ruin, about the tower or spire of a church, or beneath the tiles of a house, than in any other situation. In rocky country they are found in fissures and crevices, and in holes of rude walls.

The nest of this species is rather on a large scale, and constructed of dry stalks and grasses, and fibrous roots of plants, closely matted together ; the inner lining is hair, or feathers. The eggs, which are pure white, are from five to seven in number, and the young are hatched after thirteen days' incubation. The nestlings are fed with flies, gnats, spiders, and their eggs, chrysalidæ, and the larvæ of such insects as frequent walls and rocks. The song of the male bird is somewhat silenced during the period when the cares of the family engage his attention, although at other times incessant. At this period the parent birds are very restless and clamorous, and frequently repeat their cry of *fid-fid*, *tack-tack* ! These notes are differently pronounced from those of the common

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SYLVIADÆ.

PLATE LXI.

GRASSHOPPER WARBLER.

SALICARIA LOCUSTELLA.

THE small family of aquatic warblers in which the present species is comprised, has only three representatives in our country. These birds, which have been separated by Temminck from the sylvan warblers, under the title of "riverain," and for whom Selby has proposed the generic name of *Salicaria*, are in form, habits, manners, and song, very dissimilar from those that precede and follow them, and consequently form a distinct and remarkable little group. In their habits they are strictly aquatic: the present species resides chiefly among bogs, marshes, and ponds, while the two that follow are mostly found on the margin of rivers, among reeds and osiers. In their song these birds are far less gifted than most other families of the warblers; and are later in their time of arrival than any other of our British small birds.

The Grasshopper Warbler, rendered partially rare by its local distribution and retired habits, appears not to have been much known to our earlier British writers on ornithology. It is not included, we believe, in the first editions of Bewick; and Montagu speaks of himself as the first author who has noticed its nest. It is said, however, to have been described and known in more remote times, and afterwards to have been disregarded.





This species is found in Sweden and Denmark, in the south of Russia and Siberia, in many parts of France and Italy, and also in Germany, Holland, and some parts of Switzerland. It is only to be met with in low, swampy, and wet situations; and, as far as our experience goes, it appears to prefer standing to running water, as it does not, that we are aware of, frequent river-sides, but confines itself entirely to the vicinity of bogs, morasses, and similar situations of a wet and springy nature. We have found it on Ditton Marsh in Surrey, in a boggy enclosure overrun with long, coarse grass; also in the unenclosed part of Claremont, near the black pond, we have heard its cry. On one occasion we sought for it during a considerable time in the vicinity of this spot, which is eminently calculated to suit the peculiar habits of the species. It was on a very hot day, in the middle of summer, that we were walking among the fir-covered hills of this beautiful district, and enjoying the fresh and fragrant perfumes shed by the pine, the larch, and the red fir, that chance led us to the edge of one of the bogs, that are there interspersed among the hills. While considering in what direction we could best cross this morass, for it was of the black and quaking sort, which affords no safe footing even in summer, we suddenly heard the singular note of this little warbler, proceeding, as it appeared, from a small birch tree, so thin in foliage, and so near to us, that its concealment in such a place undetected could be hardly possible. We examined the tree with the utmost minuteness, and were satisfied that the bird did not escape: but could perceive nothing. We next traversed the bog across and across in pursuit of the note, which appeared to come sometimes from one side, and sometimes from the other. We dissected and dispersed tufts of grass, which seemed to conceal the little ventriloquist, but in vain. Still the note rung upon our ears at intervals, sometimes appearing near, and sometimes dis-

tant, and with so short a space of time intervening between its cessation and recommencement that it was not possible for the little singer to have changed its place. We have no doubt, from our knowledge of the habits of the bird, that the seeming change of place was delusive, and that the little creature had remained in the same spot during our whole search. It is, therefore, only by accident that it can be seen, the most patient pursuit being generally fruitless. This species is also known to remain so close in its covert that it is very difficult to start it.

It may be observed, that we frequently describe with minuteness the local features of a spot in which we have found any rare bird, because it may serve as an example of the sort of country in which such birds delight, and in which they are most usually found. These local descriptions of the country, therefore, and the sight or capture of individual specimens, we insert, not for the perusal of persons to whom natural history is an accustomed study, but for the use and encouragement of those who, being unacquainted with the pursuit, desire to know the easiest means of acquiring the power of making their own observations; since ornithology, one of the most interesting of country pursuits, would, we believe, be more extensively studied, we mean in the great book of nature, if the means of pursuing it with success were more generally understood. To this end it is necessary to know in what kind of situations certain birds are to be found, since few, comparatively speaking, are found without being sought for. This knowledge is the more especially necessary in the pursuit of local birds, of which this is one in an eminent degree, because they may be sought for with a probability of success in one limited district, limited by its peculiar natural features, and toiled after in all the surrounding neighbourhood, which may happen to be destitute of those peculiarities, with equal certainty of failure.

When a sight of it can be procured, which is very rarely the case, this little bird may be known by its slender form, and by its long and cuneiform tail. It occasionally may be seen, for a moment, on the lower branches of a tree or shrub in a close thicket, but soon again conceals itself. When on the ground, it runs very fast, and with much grace, in the manner of the meadow pipit; it also climbs up and descends with great agility the reeds and sedges among which it dwells, in the manner of the rest of its tribe.

The note of the Grasshopper Warbler is very remarkable, and exactly resembles the noise made by the mole cricket, or the music of the large green grasshopper. This singular note may be sometimes heard to continue for two or three minutes without cessation, and may be distinguished at a considerable distance. Morning, noon, and night may this sound be heard, at intervals, during the early part of summer, but more especially at night. Later in the season, its song is chiefly confined to the hours of darkness; and this is probably the period when the young nestlings require the attention of the parent, at which time most singing birds are silent.

This little bird has been seen to creep out of its hiding place, in a close and matted thorn, and running to the extremity of a naked branch, deliver its singular song, and then hastily retreat, by the same branch, into its dark recess. The female conceals herself still more assiduously than the male, so that a specimen of that sex can very seldom be obtained.

It is said that the only means of procuring a nest and eggs of this species is to listen to the nocturnal cry of the male during the month of June, as it is at that time most likely to be uttered in the vicinity of the nest. We have never been fortunate enough to obtain one of these rare little specimens, and can, therefore, only speak of and

describe it as it has been represented to us. We the more lament this circumstance, as we should like to know, by personal observation, the colour of the eggs, which have been variously represented. Montagu, the first English author who describes the eggs, speaks of having found them of a spotless white. On the other hand, the egg figured by us in our quarto work on British Birds, and again in the present octavo edition, is deep flesh-colour, freckled minutely with red, grey, and pale brown, giving it altogether a reddish cast. For an opportunity of figuring this rare egg, we are indebted to Mr. Yarrell, whose authority on this subject can no more be disputed than that of Montagu. It therefore appears that this egg is subject to variations in colour almost as great as are found to exist among the eggs of the meadow pipit. We are, therefore, not surprised to learn that others have found these eggs exactly resembling, in colour and markings, those of the reed warbler (fig. 63).

The nest of this species is invariably placed in the thickest part of a thorn, or furze bush, &c., where tall grasses have matted and concealed the roots and lower branches; it is always found to be suspended in the manner of the reed and sedge warblers' nest, and placed very near, although never upon, the ground. In form, the nest is deep, and somewhat pointed below: it is nearly three inches in depth within, and the rim, or binding at the top, is contracted, which is also the case with the nests of its congeners. It is composed of dry leaves and bents, intermixed with spider cots, and its inner lining consists of the very finest grasses.

The young birds, when fully fledged, resemble very nearly the adult; and between the male and female there exists no marked difference.

The Grasshopper Warbler is universally believed to have no song, unless its ringing sibilant note can be so considered: its title of "Warbler" must, therefore, be under-

stood as appertaining rather to the class than to the individual.

The food of this species consists of gnats, flies, maggots, small grasshoppers, and water-beetles, besides all the non-descript insects that are to be found among the stems and roots of reeds and other water-plants.

The entire length of the Grasshopper Warbler is five inches and a half. The wing measures, from the carpus to the tip, two inches and a quarter; the tail extends about an inch and a half beyond the closed wings. The side feathers of the tail are from six to seven lines shorter than the middle ones. The beak is four lines and a half from the forehead to the tip, and the tarsus measures eight and a half lines. The tail-feathers are very soft and broad. The first quill-feather of the wing is very short, the second and third are equal, and the longest in the wing. The beak is thin and delicate, and much compressed from the middle to the tip: the upper mandible is slightly notched; it is flesh-colour at the base, with the upper ridge and point of the lower mandible dark horn. The tongue and corners of the mouth are reddish yellow. The iris is pale sienna yellow. The tarsi are covered with three soft frontal plates; the claws are thin and narrow. The legs are, in spring, flesh-colour, in autumn yellowish: the claws the same, with dusky tips.

In colour, the upper parts of this bird are cinereous olive. The chin, throat, breast, and belly, are white, tinged with rust yellow; the sides of the breast, the flanks and vent, are yellowish-olive; the feathers upon the two latter parts are streaked along the shaft with a dusky line, which forms a constant and distinguishing character of the species. The quills are dusky, edged with olive grey, and have a rusty tinge towards the roots. The shafts of the quill-feathers on the under surface are white and glossy.

The egg marked 61 is that of the Grasshopper Warbler.

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PLATE LXII.

SEDGE WARBLER.

SALICARIA PHRAGMITIS.

IN consequence of its aquatic habits, this bird is of local distribution, and is found only in the neighbourhood of water, where rushes, and osiers, or other water-plants abound. The localities in which we have constantly found it in the greatest abundance, are the small islands that occur in the Thames between the opposite shores of Surrey and Middlesex, and which are, for the most part, appropriated to the cultivation of osiers, on account of their being under water several times in the year. These little islets, as well as various spots upon the banks of the river, are throughout the summer visited in great numbers by these lively little birds, which are continually to be heard in still and warm weather, uttering their peculiar and chattering song. This song, which is the first indication of their arrival, is seldom heard before the last week in April, these birds being, as before-mentioned, late in their spring migration. In May, we have found their nests in great abundance in the osier grounds above-mentioned, in patches of reeds, and among rank herbage in moist and marshy places. They may be discovered with tolerable facility, as little care is taken to conceal them, and the incessant babbling of the parent bird also tends to the discovery of the nest. During its stay in this country,



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which is from the end of April to September, or October, this noisy little bird may be heard at most hours of the day, and very frequently in the night, if the weather is warm ; but even the cheerful voice of this incessant chatterer is silent if the same spot is visited on a cold day, when the wind is blustering. Nevertheless, we doubt whether in more sheltered situations it is so easily silenced.

The Sedge Warbler is by no means shy, but may often be seen flitting among the branches of the willows, osiers, and reeds, it dwells in. It is restless and active, constantly employed in the search for food, which it appears to find among their stems and branches. It is not, like the preceding species, impatient of being observed ; on the contrary, we have frequently approached so close to it, when seated upon its eggs, as to touch it before it attempted its escape. When thus forced from its nest, it flies but a few yards, and making a little circuit, instantly returns ; and although chased many times from its nest, it perseveringly returns to the spot.

The song of the Sedge Warbler is, in some of its parts, sweet and pleasing, but it is almost constantly intermixed with a rough chattering note that is very unmusical : this constantly repeated note has gained for these little birds the name of chats, by which they are always distinguished by the little cow-herd boys, whose occupation confines them to the extended plains before-mentioned, that border the Thames along some part of its course.

We have invariably found the nest of this species suspended ; and usually from six inches to a foot from the ground. The plants among which we have most frequently taken it have been either reeds or nettles, to whose upright stems the nest is attached by means of the grasses, of which it is chiefly composed, being carried round their stalks. Three, four, or more reeds are in this manner made to serve

as upright supporters; and when cut down, the reeds may be easily slipped out of the sides of the nest, without in the least injuring the structure. We have also found these nests in white-thorn bushes, and in the black-thorn, or sloe, which grows in abundance on some of the open plains in this district, always about the same elevation from the ground. The materials of which they are composed are various. One of our specimens is chiefly constructed of bents, rye grass, and green moss on the outside; and internally of roots, and the down of the willow, or the willow herb, with swans'-down, and one or two feathers; lined with long horse-hairs. Another specimen is composed, on the outside, of tufts of dead grass, with the root attached; the inside is formed of roots and the flowering tops of reeds; with the down of the hare or rabbit, and abundance of horse-hairs.

The nests of this bird are well built and compact, and generally have a good deal of warm lining interwoven in their substance; the sides of the nest are often an inch and a half in thickness, and the cup measures two inches across the top, and rather more in depth. The depth and substantial thickness are highly necessary for the security of the little brood, as the slight supporters of the nest often yield to the force of the wind. In this small space of two inches in diameter, are reared six, and sometimes seven, nestlings. When the young birds leave the nest, they flutter about among their native reeds, and receive from the parent birds their minute insect food. Whether the nest is placed among reeds or in a low bush, it is always suspended; that is, the bottom of the nest never rests upon the branches beneath. We cannot agree with those authors who assert that this species chooses, in preference, for its nesting place spots inaccessible through the muddy nature of the soil; since we have found their nests, without number, on the

osier islands before mentioned, and on the flat, extended grass plains beside the Thames, the range at Shepperton in particular, which places are dry and firm, and never flooded during the summer half of the year.

The eggs of the Sedge Warbler are pale stone-colour, freckled over minutely with spots of a rather darker shade; sometimes we have found them nearly plain stone-colour, at other times marbled with pale ash-green, approaching in appearance to those of the reed warbler. We have more than once found as many as seven eggs in the nest of this species. In some nests the eggs are rather long, as figured in the plate; in others nearly round, and these are usually the plainest in colour. In all specimens dark hair-like streaks may be observed towards the larger end.

The Sedge Warbler is found on the reedy banks of rivers and lakes in most parts of England and Scotland, Wales, and Ireland. On the continent of Europe it is also of very wide distribution, occurring, in similar situations, from the most southern parts, as far north as the arctic circle.

The Sedge Warbler measures less than five inches in entire length. The wing, from the carpus to the tip, is two inches and a half; the tail extends three quarters of an inch beyond the closed wings, and the outer tail-feathers are three and a half lines shorter than the middle ones. The beak measures five lines in length.

The male and female are so much alike in appearance that one description will suffice for both. From the base of the upper mandible a pale yellow streak passes over the eye, beneath which is a dark line, passing through the eye to the ear; the cheeks are brown, intermixed with yellowish white. The throat is white, tinged with rufous yellow on the sides; the breast and belly are dirty white; the upper part of the breast and flanks tinged with rufous yellow: the rest of the under parts pale brownish yellow. The feathers

on the forehead and crown are dusky, and form a sort of cap ; the nape is olive ; the tippet the same colour, but the centres of the feathers are darker, forming spots. The lower part of the back is rufous ; the upper coverts of the tail rufous-brown ; the quills and tail-feathers clove-brown, edged with olive.

The egg No. 62 belongs to the Sedge Warbler.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXIII.

REED WARBLER.

SALICARIA ARUNDINACEA.

THIS beautiful little bird, which is considered much more rare and local than the sedge warbler, occurs in tolerable abundance on the Middlesex and Surrey borders of the Thames, and the intervening islets. It is easily distinguished from the preceding species by its upper plumage, which is of a plain brown, unvaried by spots: it is also rather larger in size, besides having many other less apparent distinctions.

Of all our summer birds, the Reed Warbler is the latest in its arrival, seldom appearing before the second week in May. It frequents spots similar to those inhabited by the sedge-bird, namely, the borders of rivers and ponds. On the Thames we have very frequently seen it and heard its song, and also taken its nests in various places. The song of this bird is far superior to that of the sedge warbler; it is often heard in the day, but more frequently at night, at which time we have often listened to it for a few minutes under the impression that we heard a nightingale of inferior quality. This deception, however, does not last long, for although the bird commences his song with many of the stanzas of the nightingale, he presently relapses into variations of his own, of the same character as the chattering notes of his congener the sedge

warbler. Neither is his voice in its better portions so clear and flute-like as the nightingale's.

The nests of the Reed Warbler have frequently come under our observation, and we have taken many of them. These we have always found in low willows or osiers growing in the water, sometimes in the bed of the river, sometimes near the shore, but always so surrounded by water as to be rarely reached by the hand without the assistance of a boat. The nests we have taken have all been suspended among the forked branches of the shrub, not resting upon the junction of the shoots, like the nests of most other birds, but elevated above the part from which the upright supporters spring. The nest has a singular appearance, being generally composed of very thin thread-like materials; and when the branch has been some time cut down, and the leaves have fallen off, the whole, to use a very homely comparison, has the appearance of a stocking in the process of knitting, hanging among its many pins. We have never found specimens of the nest of this bird suspended among reeds, but cannot deny that such situations are sometimes chosen. The eggs of this bird, represented in our plate (fig. 63) are roundish in form, and usually of the colour there indicated; but are sometimes to be found paler and of smaller size: we have never found more than three or four in a nest.

The materials composing the nest are long, fine grasses, delicate fibrous roots, the flowering tops of reeds, and the long, red, clinging stalks that we believe to be the remains of green moss. The outer portion of the nest is triangular or quadrangular, according to the number of stems upon which it hangs; but the inside is finished in a round form, and neatly lined with fine grass. Spider-webs and swan's-down are often intermixed. The nest, when complete, is nearly three inches deep within, and five or six without.

The young birds of this species are hatched in July; on

the 24th of which month we have in our note-book the following memorandum : among the pollard willows beside the Abbey river we heard some birds making a croaking noise, which sounded much like the alarm-note of the nightingale : after watching a little while, we observed several small birds flitting about, and found them to be young Reed-warblers that could just fly, and were receiving food from their parents. Their note resembled, *ikurrrrrrr ! ikurrrrrrr !* uttered croakingly. The young birds, which we could distinguish by their shorter tails, looked the yellowest ; the old birds were nearly white beneath, and had a bluish cast upon the chin and throat.

The abbey river above mentioned is a small stream that runs through Chertsey in Surrey, and joins the Thames near the spot where the ancient abbey of that name stood. We mention the spot as being a singular locality for a bird usually considered shy ; the place where the young birds were seen, and where doubtless they had been hatched, was not a stone's throw from the main street of the town, with which the little river runs parallel at that part.

The Reed Warbler is not uncommon in this country in the eastern and southern counties, but is rarely found in the midland, and has not been met with further north than Derbyshire. It is also very local even in these parts.

According to Temminck, this species is very abundant in reedy spots in Holland, France, and Germany, but rare in more eastern countries. It retires early from Europe.

The entire length of this bird is five inches and a half. The wing, from the carpus to the tip, is two inches and a half ; and the tail extends nearly an inch and a half beyond the wings when closed ; the two middle feathers of the tail are the longest, and are rather pointed. The beak is slender and long, measuring five lines from the forehead, and nine lines from the gape, to the tip ; it is brown on the upper

mandible, and yellowish flesh-colour on the lower; the gape is furnished with fine bristles. The eye is small, but brilliant, and of a pale orange colour. The legs and feet are silvery-grey, the soles yellowish.

The whole upper plumage of the Reed Warbler is greyish-olive, without any darker spots: the quill and tail-feathers are dusky, bordered with olive-brown. A slightly defined dusky line extends before and behind the eye, and a pale yellowish-brown streak passes above it. The under parts of the plumage are, in old birds, silvery-white upon the chin and belly, and yellowish-rufous upon the chest, flanks, and sides of the neck. The feathers above the knee are rufous.

The egg of the Reed Warbler is figured 63.



61.



62.



63.





*INSESSORES.
DENTIROSTRES.*

SYLVIADÆ.

PLATE LXIV.

NIGHTINGALE.

SYLVIA LUSCINIA.

It is well known that, in some parts of England, Nightingales are very abundant, while in others, apparently offering the same natural advantages, they are never found. They are most numerous on the eastern coast, and extend as far as the southern border of Durham, which appears to be their boundary in that direction. They are found in some of the midland and southern counties of England, as far west as the third degree of longitude, as observed by Mr. Blyth ; but in the western half of the kingdom, including the greater part of Devonshire, Cornwall, Wales, and Lancashire, they are never met with ; neither have they been ever found in Scotland or Ireland.

Respecting the partial distribution of these delightful singers, many conjectures have been hazarded, but none either very conclusive or satisfactory. "Nightingales," observes Gilbert White, "not only never reach Northumberland and Scotland, but also, as I have been always told, Devonshire and Cornwall. In these last two counties, we cannot attribute the failure of them to the want of warmth ; the defect in the west is rather a presumptive argument that these birds come over to us from the continent at the narrowest passage, and do not stroll so far westward." How is it, then, we

would ask, that the blackcap and other warblers, possessing probably not greater powers of flight, should extend over many parts of the sister kingdoms in which the Nightingale is unknown?

Neither is it reasonable to suppose that Wales, Ireland, and the few excluded counties of England, are altogether destitute of a particular insect food necessary to their subsistence, unless we take into consideration the nature of the soil, which operates unquestionably upon the distribution of the insect race, through the medium of those vegetable productions upon which the larvæ of many of that race are supported. That the soil of Wales and of Cornwall differs very essentially from that of other parts of the island, is apparent to the most casual observer, in its stoney and rocky surface, no less than in its internal treasures of metals and ores.

Montagu, who had in captivity a little brood of this species, observed that the parent Nightingales fed them chiefly with green caterpillars, but does not mention of what description these were supposed to be. This is to be regretted, as it might have afforded a clue to this curious investigation, since we know that many insects, in the caterpillar state, confine themselves entirely to one or two species of plant for food, and reject all others.

The conjecture mentioned by the same naturalist, that Nightingales may possibly not be found except where cowslips grow, agrees with the theory here hazarded, that the soil may have great influence on the partial distribution of birds. With regard to cowslips, which indicate a particular soil, moist and loamy, we can add our own testimony in corroboration of this opinion, that the places which we have constantly known to be most frequented by Nightingales *are* well supplied with this fragrant plant.

But, if the excluded parts of the kingdom are not supplied with the food proper for this species, it may be asked, upon

what, then, did the redbreasts feed their foster nestlings, in an experiment made by Sir John Sinclair to introduce Nightingales into Scotland? These Nightingales, we are told, were safely reared, flew, and remained in the same vicinity until the usual period of their migration; but the following season none returned.

The line of demarcation being so strongly drawn that limits the western range of this species, and which, apparently, they never pass over, we are induced to hazard another supposition on the subject, which we leave to future observation to confirm or confute. As these warblers are invariably found in low, sheltered, and wooded localities, it is possible that their nature does not incline them to pass over hilly and mountainous boundaries, such as they must surmount in attempting to reach Scotland, or the excluded parts of England and Wales; and, consequently, that their dispersion over the eastern half of England only, may rather be due to its generally level character, than to any of the supposed causes before mentioned.

In support of this conjecture we may observe, that the countries on the Continent which are most frequented by the Nightingale, are also, in their general aspect, level. These are, Holland, Denmark, Sweden, Russia, and Siberia, northward; and, to the south, France, parts of Italy and Spain, of Germany and Austria. We have frequently remarked that Nightingales avoid isolated hills, even of small elevation, though covered by wood and pasture, orchards and gardens, such as might tempt the sojourn of any sylvan warbler; at the same time that, in the low surrounding country, they have been plentiful.

The style of country most resorted to by this species, according to our observation, consists of cultivated plains, interspersed with hedgerows and plantations, and hills of gentle ascent and very moderate elevation. The presence of rivers

or running streams does not appear necessary to them, as we know them to subsist in great numbers in situations at some distance from running water; therefore, their seeming partiality for river-side localities may be in consequence of their usually low and sheltered position.

The continent of Europe possesses another and larger species of Nightingale, the *Sylvia philomela* of Bechstein, which, from its habit of residing in hilly as well as in level countries, might be more worthy the attention of experimentalists who wish to establish these delightful warblers beyond the limits of our native Nightingale; but, as the position of this species is still further removed towards the east, being an inhabitant of Austria, Germany, and Poland, it is doubtful whether individuals reared in this country would return.

The arrival of this species in England takes place usually in the middle of April; and sometimes, on the coast of Suffolk, as early as the 7th of that month. The presence of the males, whose arrival precedes that of the females by some days, is immediately announced by their incomparable song, which, when first heard in the still moist evenings of this hopeful season, adds another charm to the opening promises of spring. The song of this delightful warbler has been allowed, in all ages, and we believe in all countries where it is known, to be unrivaled. Buffon, after enumerating many of the finest singing birds of Europe, including the blackcap, the lark, the canary, and the blackbird, affirms that the song of each of these, when taken in its whole extent, is only one couplet of that of the Nightingale.

The power of the song of this species is no less surprising than its elegance and variety; it has been ascertained that its voice may be heard, when the air is calm, to fill a space of a mile in diameter. It has been also noticed by Mr. Hunter, that the muscles of the larynx are, in this species, stronger than in any other of its size.

The Nightingale, in its natural state, is by no means a shy bird ; it may be frequently noticed by day by those who are acquainted with its plain brown plumage ; and in the silence of night, when its presence is more easily detected by its song, it is found in many sylvan localities to be an inhabitant of our gardens, wherever tall trees invite its residence. When caged, the Nightingale is capable of strong attachment towards those who feed and attend upon it, and may be kept for a considerable time. Bechstein mentions one that lived in confinement twenty-five years. Individuals caught soon after their arrival in this country may frequently be preserved without difficulty, but when taken later in the season, after the females have appeared, they pine and die. Young birds may be brought up from the nest with a reasonable degree of care, and these, having never known the charms of liberty, are not conscious of its loss. The young nestlings very early begin to sing ; we were lately assured by a person who is fond of ornithology, and who has, with much success, frequently brought up nestlings of this species, that a young Nightingale, taken by him from the nest, began to sing on the seventh day from its capture. It was, he conjectured from the forwardness of its nestling plumage, about nine days old when taken, so that on the sixteenth day of its existence this little warbler, taught by native instinct, commenced its musical career. We cannot but consider this as an instance of precocious talent, since few birds begin to sing while in their nestling feathers.

Gilbert White's opinion, that Nightingales enter England at the narrowest passage, namely, at the straits of Dover, appears very probable, as they are heard much earlier on the continent of Europe than they are here. In Holland, they arrive sometimes as early as the middle of March, at which time we have frequently heard them, in plantations on the borders of the Amstel, in the immediate vicinity of Amster-

dam. These plantations are situated in a warm and sheltered spot, being on low lands that have been recovered from the sea.

In captivity, the Nightingale sings in the day as well as in the night, in winter and in summer, except during the period of moulting. We have observed that birds, even in the house, are always silent and subdued during a thunderstorm. A Nightingale that we had in Holland, where severe thunderstorms are very prevalent in hot weather, always forewarned us of the moment when the severity of the storm was beginning to give way, by breaking forth into his sweet song before any other sign of its abatement was apparent to us.

The Nightingale is of a solitary disposition as far as regards his own species, and very tenacious of the undisturbed possession of his own domain; which may indeed be considered his by former tenure or hereditary right, as this species is believed invariably to return, year after year, to pass the summer in the place of its birth. When re-established in their summer haunt, these birds wander but little, but may be heard nightly to pour forth, each from his respective tree, their plaintive melody. This fact may be observed by any one at all conversant with these birds, as there exists great variation in the qualities of their song, some being much finer singers than others.

The Nightingale constructs its nest either upon the ground or against a stem at the elevation of two or three feet above it; the locality chosen is usually a plantation, grove, or thick overhanging hedge in a sheltered spot, where the air is fresh and cool and the ground moist. The nest is generally composed chiefly of fallen leaves. A specimen in our possession is formed of dead leaves of the oak, which are curiously and beautifully arranged. Each leaf is placed nearly upright, with its stalk towards the base of the nest, and a number of leaves being employed, and placed with

great regularity, the whole has much the form and size of a half expanded water-lily. The oak leaves thus curiously arranged are interwoven with strips of bark, and portions of dry rushes, so as to form a very solid and thick nest; and the inside is lined with long fibres of bark, roots, and a few hairs. Such a structure, although in strict harmony with the habits of the Nightingale, must, we think, have more of poetry than comfort in it, as not a single substance of warmth or softness enters into its composition. This nest contained four eggs when taken, but five are frequently found; they are in colour oil-green, as represented in the plate, and roundish in form. Some vary from this description, and are much longer in form, paler in the ground-colour, and mottled with olive-brown. The young birds soon leave the nest, and flutter among the underwood and hedge-rows. If their place of concealment is at this period discovered, the old birds are most clamorous in their expressions of anxiety, and frequently repeat sharply the word *tack!*

The attachment of this species to its young, and its grief at their loss, have been noticed by many writers, ancient and modern. Our friend, the Rev. E. J. Moor, sends us, on this subject, a memorandum from his journal: "One evening, while I was at college," he says, "happening to drink tea with the late Rev. J. Lambert, Fellow of Trinity, he told me the following fact illustrative of Virgil's extreme accuracy in describing natural objects. We had been speaking of those well-known lovely lines in the fourth Georgic on the Nightingale's lamentation for the loss of her young, when Mr. Lambert told me that riding once through one of the toll-gates near Cambridge, he observed the keeper of the gate and his wife (who were aged persons) apparently much dejected. Upon inquiring into the cause of their uneasiness, the man assured Mr. Lambert that he and his wife had both

been made very unhappy by a Nightingale which had built in their garden, and had the day before been robbed of its young. This loss she had been deploring in such a melancholy strain all the night, as not only to deprive him and his wife of sleep, but also to leave them in the morning full of sorrow; from which they had evidently not recovered when Mr. Lambert saw them."

The food of this species consists of insects of different kinds, chiefly terrestrial. On this account it is often seen upon the ground, although its habits are decidedly arboreal, as it mostly resides and sings among lofty trees. When upon the ground, this bird stands very erect, as if conscious of the high rank he holds among his fellows. His flight from bush to bush is very light, on account of the breadth of his wings and tail. The Nightingale retires from this country in August or September, and leaves the most southern parts of Europe in October, to winter, as it is believed, in Africa and Syria.

The entire length of this species is six inches and a quarter. The beak measures five and a half lines from the tip to the forehead, and nine lines to the gape. The wing is three inches and a quarter long, and the tail extends an inch and a quarter beyond it when closed: the third quill-feather is the longest. The tarsi measure an inch in length, and are undivided in the shaft; they are brownish flesh-colour. The beak is, at the base of the under mandible, flesh-colour, the rest brown; the corners of the mouth are yellow. The upper plumage, including the head, back, and wings, is cinnamon-brown; the tail and upper coverts rust-coloured; the under parts are greyish-white, the sides of the breast and flanks tinged with reddish-brown; the iris is greyish-brown. There is little perceptible difference in plumage between the sexes, except that the throat of the male is whiter than that of the female.

In our plate the egg of the Nightingale is figured 64.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXV.

BLACKCAP.

CURRUCA ATRICAPILLA.

THE Blackcap, the next in rank, as a singing-bird, after the nightingale, is occasionally seen on the eastern coast of England as early as the 28th of March; but in late seasons its arrival is sometimes not noticed before the middle of April. This species is more widely diffused throughout these kingdoms than the nightingale, being found in Scotland, Wales, and Ireland. It is also extensively spread over the continents of Europe, Asia, and Africa, occurring in many distant parts, as we are informed by various observers. Japan, Java, the Cape of Good Hope, Norway, Lapland, and Sweden, and many intermediate parts, have furnished specimens of this species, in no way differing from our own.

The Blackcap is more hardy than many of our summer visitors. Instances have been recorded of its being shot in this country in winter; which must, however, be considered as of rare occurrence: but it does not, like our most tender migratory birds, entirely leave Europe in the autumn, since Temminck observes that some of this species pass the winter in the vicinity of Messina.

This warbler inhabits hilly as well as level country, and is even found in Switzerland. It frequents woods, planta-

tions, and thickets, especially where the ground is well covered with brushwood and tangled herbage. Many of them also inhabit gardens and orchards, where, in the spring, they are eminently serviceable in destroying innumerable insects, such as small caterpillars, which they pick from among the buds, blossoms, and leaves of fruit trees; also the chrysalides of various insects which are secreted about their rugged bark. These services are apt to be forgotten when, as the summer fruits ripen, the Blackcap is found among the foremost in partaking of them, and that not sparingly. Its partiality is particularly evinced for cherries, especially the most juicy sorts, of which it is so fond that it can hardly be driven from them, but returns again and again to a favourite tree. This species feeds also upon the berries of the ivy and the elder, upon blackberries, dewberries, etc. It seldom takes insects upon the wing, but occasionally descends to the ground in search of worms and crawling things.

We have occasionally seen, in gardens and hedgerows, the young nestlings beginning to fly, and attended assiduously by the parents. When they find themselves followed or observed, the old birds utter sharply, like the nightingale, the warning note, *tack!* The young birds, in their nestling plumage, resemble the female, but when the autumnal moult commences, the beautiful black cap of the male begins to be assumed. This makes its appearance first about the base of the beak, which part becomes interspersed with minute black feathers, extending gradually over the whole head: and we have observed, in specimens which we have brought up from the nest, that the song of the male commences simultaneously with the first appearance of the black hood. The beak and legs of this species are, in young specimens, of a beautiful clear grey colour, and of most delicate texture, resembling the finest kid leather:

in adult birds the beak is tinged and tipped with dusky-horn.

The Blackcap is described by Gilbert White as "a delicate songster." "Its note," he says, "possesses a wild sweetness, and when this bird sits calmly and engages in song in earnest, he pours forth very sweet but inward melody, and expresses great variety of soft and gentle modulations, superior, perhaps, to those of any of our warblers, the night-ingale excepted." Its wild warbling song bears, in some of its upper notes, a resemblance to that of the redbreast, for which it is often no doubt mistaken; but it has less of shrillness and more of melodious depth and fulness. It far surpasses that bird in its lower tones, which are as round and full as the finest notes of the song thrush, and of surprising power when the small size of the delicate creature is considered. This bird is by no means shy in its habits, nor does it seem solicitous to conceal itself when singing, but openly sits on the branch of a fruit-tree in an orchard or cottage garden, and appears not at all disturbed by persons passing, but calmly looks around, pouring forth from time to time its melodious song.

The nest of the Blackcap is usually placed among brambles, nettles, or low underwood: it is a thin structure, composed of dry grass and stalks, and lined with a few hairs. Towards the end of April eggs of this species may be found; they vary in number from four to six, and although the colour and other particulars differ much in different specimens, they usually present a marked character by which they may be readily distinguished from all but the eggs of the garden warbler, to which they often bear a great resemblance. The ground colour is usually reddish-white, marbled with olive-brown and ash-grey, over which are strewed a few round dusky spots, each surrounded by

a reddish-brown border, resembling the mark of a burn, which character is seldom wanting.

The manners of this species are light and lively, and when singing it swells its throat and elevates its crest. Its feet and legs are small and short, and well adapted for perching.

The male bird of this species is distinguished by its black hood, or cap, which, commencing near the base of the bill, covers the crown of the head. The nape and sides of the neck are fine bluish-grey; the throat and under parts are silvery or greyish-white; the breast and flanks are tinged with peach blossom. The back and lesser coverts of the wings are grey, tinged with green, the rest of the wings and tail dusky brown. All the colours of the plumage are beautifully softened one into the other, and the tail appears slightly forked when closed. The female is readily known from the adult male by her hood, which is of a reddish-brown colour; the rest of her plumage much resembles that of the male, but the feathers of the under parts are tinged with rufous-yellow.

The beak is rather short, the nostrils are naked, and of a long oval form. The iris is reddish-brown.

The entire length of the Blackcap is nearly five inches and three quarters: the wing measures two inches and three quarters, and the tail extends an inch and a half beyond it when closed. The beak is five lines from the tip to the forehead, and the tarsi measure nine lines. The first quill-feather is short, the third the longest in the wing.

The egg of the Blackcap is figured 65.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXVI.

GARDEN WARBLER.

CURRUCA HORTENSIS. (*Bechstein.*)

THE Garden Warbler is another of that interesting class of small birds that visit our island in summer, and delight us with their rich, melodious, and varied songs. This species, as its name implies, is one that frequents the neighbourhood of man, and adds its sweet note to the summer music of our gardens. It is not so commonly known as many of our migratory birds, as it is shy and retired in its habits, and being very plain in its plumage, is not readily distinguished when on the wing from other warblers of its size.

The song of the Garden Warbler is considered to be very little inferior to that of the nightingale; it possesses sweetness, variety, and depth of tone; and many of its flute-like notes resemble those of the blackbird. Its song is well sustained, and frequently continued during the greater part of the day.

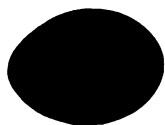
As a species, the Garden Warbler is tolerably well diffused, being found in most parts of England, and, according to Selby, occurring throughout the greater part of Scotland, in wooded districts on the margin of rivers and lakes. It is not, however, numerous, or its habits keep it much concealed. As this bird is rather late in its arrival, which varies from the middle of April to the middle of May, it probably produces but one brood in the season. It builds

usually in low bushes or underwood, and forms a slight nest loosely constructed, and composed of dry grass stalks, strips of the fibrous stems of hemlock or nettles, and rarely a little green moss. Very little care is taken to conceal the nest. The eggs, usually five in number, are mottled with ash-grey and brown upon a reddish-white ground. Some differ from this description, and resemble very nearly those of the blackcap.

The food of this species is the same as that of the preceding, to which may be added the caterpillars of the cabbage butterfly, which, although rejected by most other birds, are by these eagerly devoured.

The Garden Warbler is, according to Temminck, abundant in Holland, and common in all the southern and temperate countries of Europe. It commences its migration southward as early as August. This bird is the Fauvette of Montagu, and the Greater Pettichaps of Selby.

The egg of this species is figured 66 in the plate.



64.



66



65.



1. The first part of the document is a list of names and addresses of the members of the committee.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXVII.

WHITETHROAT.

SYLVIA CINEREA.

THE WHITETHROAT is not among the earliest of our spring migrants, appearing seldom before the middle or end of April. It is considered one of the most common, and most generally diffused of summer birds, an opinion we are not disposed to contradict, as we have usually met with the nests of this species more frequently than those of any other summer bird. There is scarcely a green lane in the country, or thick hedge, or patch of furze, where these birds may not be found, and detected by their lively song. From such a spot they may be often seen to rise singing, and performing some curious evolution at the same time, as if to express their enjoyment of existence: they also sing while on the wing from bush to bush.

The song of the Whitethroat has been much maligned, and said to be so interspersed with harsh notes as to be beneath attention; nevertheless, this species has made some friends among those whose opportunities of observation were the greatest. Sweet says of its song that, in his opinion, "it cannot be surpassed, as it is both lively, sweet, and loud, and consists of a great variety of notes." White, on the other hand, says, "The note of the Whitethroat, which is continually repeated, and often attended with odd gesticulations

on the wing, is harsh and displeasing." "These birds," he continues, "seem of a pugnacious disposition; for they sing with an erected crest, and attitudes of rivalry and defiance; are shy, and wild in breeding time, avoiding neighbourhoods, and haunting lonely lanes and commons."

These various opinions, however, with regard to the singing powers of this species may be easily reconciled. The louder notes are sometimes harsh, and as these only are occasionally heard, they have procured for this little warbler a character which it does not, on nearer acquaintance, deserve.

We are among the admirers of these lively birds, having frequently heard them sing most agreeably while sporting up and down above the tops of the trees, rising and falling with a peculiar action of the wings and body; then starting off to another tree, and presently returning, again and again, singing all the while their loud and clear song. The song is different from that of most other birds, and in our opinion forms a most pleasing variety; it is delivered in sounds clear and distinct, and set in rather a low key.

The Whitethroat, although shy in its personal habits, is the least careful of all small birds in concealing its nest, which it often places in situations so exposed to observation, as to excite wonder at its apparent want of precautionary instinct. The situations chosen are various: the elevation usually about two feet from the ground. We have sometimes found the nest in a close furze bush; but more frequently among brambles or nettles beside a ditch or bank.

We have noticed a singular feat, acted by this little bird, which was probably intended to draw our attention from its nest. Passing a high bank in a lane, we observed a Whitethroat rolling down its sandy side, and throwing itself into strange positions, as if wounded; it struggled and shuffled along, keeping itself just beyond our reach, and finally flew away. Suspecting the design of this manœuvre, we sought

about the bushes that grew beside the bank, and presently, at the distance of a few yards, found the nest. Does this action, practised by many birds besides the Whitethroat, proceed from the agony of its alarm, or is it an affectionate device, practised to draw off the attention of the intruder from its ill-concealed treasure?

During the spring, the Whitethroat is found generally dispersed throughout the country: we have found them in low and flat localities, and also on the tops of hills of two or three hundred feet in elevation. According to Gilbert White, they are found on the very tops of the Sussex downs; where there are bushes and covert. In summer, as soon as the young can fly, a change of residence takes place, and the nestlings are conducted by their parents to orchards and gardens, where, the fruit being then ripening, they commit much mischief, and are generally held, among gardeners, in great disrepute.

This bird is found throughout Europe, the most northern parts excepted: it penetrates as far as Sweden and Russia, beyond the range of any other of the warblers except the blackcap. In the middle, and southern parts of Europe, it is the most common of all the *Sylvias*. It is plentiful in Holland.

The note of this species, when alarmed, is *shurr*; and the call of the male in spring is *hwed! hwed!*

The food of the Whitethroat consists of winged insects, and small beetles with their larvæ, and caterpillars; also many kinds of fruit.

The nest of the Whitethroat, although usually denominated a slight structure, is one of remarkable interest and beauty, and presents to the observing naturalist matter for much admiration. It is indeed in appearance a slight structure, but its component parts are so skilfully and beautifully interwoven, that we know not any nest more strong, firm,

and elastic. The last named quality, elasticity, is due to the horse-hairs with which it is usually very thickly lined, so as, in some specimens, nearly to conceal the stalks or grasses of the outer work; while in others very few hairs are perceptible. We must conclude that in the nests of this species, as well as others, many varieties of construction occur, since we can neither find that specimens in our possession are bound together outside with spider webs to keep them together, nor the horse hair glued with saliva, as some credible authors have affirmed. All the specimens we have seen are formed exteriorly of the dry, rough stalks of a species of galium, sufficiently clinging in its own nature to answer the purpose required; and we think no necromancy is necessary, beyond the instinctive skill of the little architect, to keep the long hairs in their places. Let us not, however, be understood to disparage the qualities of spider cots as a building material of the most efficient kind; since some nests, such as those wonderful structures of the long-tailed titmouse, appear to owe a great deal of their consistency to this production. We have noticed, in all the nests of this species that have come under our observation, that the hairs used for lining have been of a dark colour, mostly black; but we do not know whether this is a constant character.

The eggs of the Whitethroat vary greatly in size and colour; but in the character of their markings they are tolerably constant. The dimensions vary from nine and a half lines, the size represented in the plate, to eight lines. The most usual colour of the ground is pale green, mottled with greenish brown, and freckled over the larger end with dull ash-coloured spots. In some nests of this species very different eggs are found: we have some specimens nearly grass green, freckled with large dark-green spots; others in which the ground colour is olive brown, freckled in a similar

manner with dark brown and black; other specimens are nearly as pale as the egg of the Dartford warbler, figured below. In our plate we have represented one of the most usual appearance.

The entire length of this species is five inches nine lines. The wing measures two inches eight lines from the carpus to the tip; its first quill-feather is remarkably short, not exceeding four lines in length, the second is only half a line shorter than the third and fourth, which are equal, and the longest in the wing. The tail extends beyond the tips of the closed wings one inch and a half; its feathers are graduated, and slightly decreasing in length from the middle towards the sides, the outermost being four lines shorter than the central ones. The beak measures four lines from the forehead to the tip, and the gape is very slightly fringed with hairs. The tarsi measure eleven lines.

The plumage of this beautiful little bird, although not remarkable for the brilliancy of its colours, presents an elegant assemblage of tints the most delicate and soft, shading into one another like the tints upon mother-of-pearl. The silvery white of the throat loses itself in the lovely peach-blossom of the breast, which again gives place to white upon the belly; the flanks and under coverts of the tail are white, tinged with pale orange-brown. The upper plumage is, upon the head, nape, and ear-coverts slate colour, tinged with brown; the back is olivaceous brown; the upper coverts of the tail inclining more to olive. The quill-feathers of the wings are brown, with lighter edges; the tail the same, except the outer feather, which is of a dull white; the coverts of the wings and tertials are brown, deeply bordered with rust. The beak is dark bluish horn; the base of the under mandible yellow, the corners of the gape yellowish-green. The iris is olive-yellow, lightest against the pupil; the eye-

lids are naked, and olive-brown in colour. The legs are pale rust-colour in the tarsus, the feet are olive-brown.

The female very nearly resembles the male, but her colours are more obscured by brown, and the rose-colour upon the breast is less apparent. It must be observed that this colour fades very soon after death, so that in preserved specimens nothing of it is to be seen.

Figure 67 in the egg-plate is that of the Whitethroat.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXVIII.

LESSER WHITETHROAT.

SYLVIA CURRUCA.

THIS lively and elegant little bird arrives in England among the earliest of our summer warblers, about the same time as the blackcap. Its presence is soon betrayed by its very peculiar call-note, which it utters continually, and with which it always terminates its pleasing song. This is a shaking double note many times repeated, and most resembles *rucca! rucca!* from which probably has arisen its trivial name. As soon as it has reached its destination, this little bird may be seen perched upon the top of a tree, a leafless one being generally chosen, singing its merry and noisy song, which, beginning with a few soft warbling notes, uttered in a very hurried manner, is usually concluded as before described. The little vocalist all the while is seen frisking and hopping up and down, and snatching from time to time some insect from the naked branches. Its terminating song is uttered apparently with the full extent of its lungs, its little bill wide open, and the feathers of the head and neck set up so erect that the head appears nearly the size of the whole body. Sometimes the song is commenced with a long shrill note, resembling *see-ee!* concluding always with the before-mentioned termination. Whether at rest or in motion the song continues the same at intervals, and is not even interrupted

by its flight from the top of one tree to another, but is continued when on the wing.

In the time of Gilbert White this bird was but little known, but is mentioned by him in the following terms, in one of his letters ; " A rare, and I think a new little bird frequents my garden, which I have great reason to think is the pettichaps ; it is common in some parts of the kingdom, and I have received formerly several dead specimens from Gibraltar. This bird much resembles the whitethroat, but has a more white, or rather silvery breast and belly ; it is restless and active, like the willow wrens, and hops from bough to bough, examining every part for food ; it also runs up the stems of the crown imperials, and putting its head into the bells of those flowers, sips the liquor which stands in the nectarium of each petal. Sometimes it feeds on the ground like the hedge-sparrow, by hopping about on the grass-plots and mown walks."

The Lesser Whitethroat is far from being so common as the larger species ; on the contrary, it is considered as rather a scarce bird in many parts of England. In various localities, however, in Surrey, we have found it in tolerable plenty, especially in the most wooded parts ; and its nests and eggs have frequently been brought to us. It is in this county in far greater plenty than the blackcap. In gardens and orchards, which are usually much frequented by this species, they may often be seen flitting among the fruit-trees in search of insects, especially the green aphides that infest them in the spring ; and they also approach close to dwellings, with the greatest seeming familiarity, to seek for similar insects among roses, and other flowering shrubs. This species frequents gardens more than the preceding, which rather delights in lonely hedges and commons, scattered with furze.

While listening to the notes of birds, the truth of an observation made by Rennie has often come in full force to

our mind. "It is, perhaps, too much," he remarks, "to say that we have borrowed all our music from birds; but some of it is evidently a plagiarism." We are disposed to go further than the admission of Rennie on this subject, since in birds we find the only natural musical language. In music they express all their joys, and hopes, and fears. The melody uttered by some of them is enchanting: the variety without end. What can surpass the stately recitative of the blackbird? whose song, when heard in distant woods, sounds like the warning voice of one of the old prophets, preaching repentance to a heedless world. Or who can sing a hymn of praise equal to that poured forth by every lark that rises on the wing.

The vocabulary of some birds is also of considerable extent, especially during the early months of the year, and may by an attentive observer be heard to increase in extent as the season advances. They continue to acquire new notes as far as the month of May, at which time all birds are in the height of their song. From this time their vocal powers diminish, even before they cease to sing. Some appear to leave off abruptly, without the apparent causes usually assigned. At the present time of writing, the 30th of May, we have scarcely heard, for some days, the song of a nightingale which has its nest in our garden, although, contrary to the usual belief that this bird continues in full song during the whole time that the hen sits, the nest has not been completed a week, and two days ago only the fifth egg was laid. We now hear the male bird very rarely, scarcely one stanza in a day, and in the night he is wholly silent. Instead of the incessant song of nightingales, blackcaps, larger and lesser whitethroats, thrushes, etc., which have alternately been heard, for the last month, during every hour of the day and night, nothing is now to be heard but the occasional chant of the blackbird, the monotonous song

of the yellow bunting, the clinking of the titmouse, or the unceasing inquiries of the sparrow upon the house-top, respecting the welfare of his mate, who sits upon her eggs beneath the roof. Even the extraordinary and indescribable notes of the starling are discontinued.

The nest of the Lesser Whitethroat is, like that of the preceding species, slight in appearance, and built of dry stalky materials. The one now before us is composed of a few stems of galium, interwoven with many dead and half decomposed leaves of a long form, probably willow or osier. Several cots of spiders are employed in the outer work, and the inside is thickly lined with fine roots. The eggs are longer in form than those of the larger whitethroat, although smaller in size and differently marked. They are usually white in the ground colour, and the shell is so thin that when fresh the yolk is plainly to be seen, as is the case with many other white eggs. A few large freckles of pale brown are dispersed over the egg, and many dark brown spots of different sizes, and a few hair-like streaks, are scattered

unequally over the surface: in some specimens these form a zone round the larger end. Dull ash-coloured spots are also visible in the zone, which we observe generally to prevail in all specimens of the Whitethroat, Lesser White-throat, and Dartford Warbler. These eggs occasionally vary in the ground-colour, some inclining to reddish, some to greenish-white.

The nest of this species is usually placed in a low bush, or in a bramble overhanging a tangled hedge, and rather better concealed than that of the larger species. The little bird practises similar curious devices when its nest is approached as before described.

The Lesser Whitethroat is found scattered over many of the counties of England and Scotland, in the most wooded parts; it also visits the other countries of Europe as far

as Russia: it is abundant in Asia, and is supposed to pass the winter in the warmest parts of that quarter of the globe, and in Africa.

The plumage of this species, taken from an adult male specimen shot the middle of May, is as follows:—head and ear-coverts very dark slate-colour, tinged slightly with brown. Eyelids and corners of the gape grey, the feathered orbits surrounding the eyelids a little browner than the rest of the head. The wings and tail are rich dark brown; the outer feather of the tail whitish. The back, scapulars, and upper tail-coverts are slate-colour, tinged with brown. The whole under parts, including the chin and under tail-coverts, beautiful greyish-white. Under coverts of the wing greyish-white. A very slight tinge of yellowish-brown upon the flanks and sides of the breast, beginning below the white of the throat. The beak is dark-grey, almost black, except the base of the under mandible, which is lead-colour. The legs and toes are very dark lead. The iris pale greyish-brown. In young birds, the eyelids and corners of the mouth are yellow.

The entire length of this species is five and a half inches. The wing measures, from the carpus to the tip, two inches and a half; the first quill-feather nine lines, the second is one line shorter than the third and fourth, which are equal, and the longest in the wing. The tail, as represented in the plate, has the middle and outer feathers rather shorter than the intermediate ones. The legs are small and delicate.

In preserved specimens, it is sometimes difficult to distinguish readily the difference between this and the preceding species, when the colours of the legs and beak are faded; but in all states a constant distinction may be found in the first quill-feather, which, in the larger whitethroat, is scarcely half the length of the same feather in the present species.

The egg of the Lesser Whitethroat is figured 68 in the plate.



The first part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The second part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The third part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The fourth part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The fifth part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The sixth part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The seventh part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The eighth part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The ninth part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London. The tenth part of the book is a history of the city of London, from its earliest days to the present. It is a very interesting and well-written book, and it is a must-read for anyone who is interested in the history of London.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXIX.

DARTFORD WARBLER.

SYLVIA PROVINCIALIS.

THE DARTFORD WARBLER, which was formerly considered a very rare and local species in this country, has, of late years, been frequently found, perhaps because more diligently sought for, in many parts of England. It appears to confine itself entirely to heaths and commons, where it can have plenty of cover. In such a locality it was first observed in England, namely, on Bexley Heath near Dartford; and it has subsequently been found to inhabit similar localities in various other parts of the south of England. We are told by continental authors, of the frequent occurrence of this species in Spain, Italy, and the south of France; but it is asserted not to be met with either in Holland, Germany, or more northern parts. The accounts of its being apparently confined to the southern coast of Europe, appear somewhat difficult to reconcile with the fact of its having been found in England at all seasons of the year, winter as well as summer, and we think that this and many other parts of its natural history require further elucidation. Possibly it does not migrate at all, but may remain stationary in all the above-mentioned countries throughout the year, as some of our little wrens do here.

The great shyness of this species, renders it difficult to

become acquainted with its habits, and with its mode of subsistence during the cold months of winter, when winged insects, which appear to be its food in summer, cannot be obtained. In Surrey we have seen this little bird in several places, such as Wimbledon Common, Burwood Common, the vicinity of St. George's Hill and other parts, generally in the act of flying for shelter, which they do on the least alarm. They are sometimes seen perched upon the upper sprays of the furze bushes, or rising up a few feet above them, singing their little song. On the approach of a human form, they flit from branch to branch, until hidden within the interior of their thorny shelter, whence it is very difficult again to dislodge them, as they creep from one bush to another; and their dark plumage also tends still further to conceal them.

The nest of this species is usually found among the largest and tallest furze bushes, where they are closely matted with brambles, and difficult of access, and can seldom be discovered, except when the birds are building, or in the act of carrying in food to their young. It resembles much in structure that of the whitethroat, and is constructed of similar materials. One in our possession is composed externally of stems of one of the galium family, lined with the long stiff stalks of some umbelliferous plant, and a few long hairs. This nest is so transparent, that on holding it up to the light, the form of the eggs may be seen through it, yet so well put together, that neither a straw nor hair can be taken from within, unless with a sort of violence. Some, which are built with broader grass and a little wool, are more substantial in appearance, and less pervious to the eye.

The eggs of the Dartford Warbler, which measure about nine lines in length, bear much resemblance to the paler specimens of those of the whitethroat. The characteristic zone of ash-grey spots, round the larger end, is very faintly defined upon a stone coloured ground; and the whole surface is equally mottled over with olive brown.

The entire length of this species is five inches and a quarter. The wings, from the carpus to the tip, measure two inches; the middle feathers of the tail are two inches and a half in length, and extend two inches beyond the closed wings; the outer feathers are nearly half an inch shorter than those in the centre. The beak is of moderate thickness, and measures six lines from the point to the gape. The tarsi measure eight lines.

The whole upper plumage of the adult male is very dark slate grey, darkest on the head and ear-coverts; the hair-like feathers of the back are strongly tinged with olive-brown. The wings are blackish-brown, narrowly edged with rusty-olive; the tertials and greater coverts more broadly edged with the same. The throat, neck, breast, and flanks, are deep ferruginous, the middle of the belly white. The tail feathers are dusky, edged with hoary ash, the two central ones almost entirely of that colour. The beak is black, the base of the under mandible whitish. The iris and eyelids are yellow; the legs yellow.

The female and young differ but little, except in being rather paler.

The egg of the Dartford Warbler is figured 69.

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67.



68



69.





Pl. 70.

*INSESSORES.
DENTIROSTRES.*

SYLVIADÆ.

PLATE LXX.

CHIFF-CHAFF.

SYLVIA HIPPOLAIS. (MONTAGU.)

THE CHIFF-CHAFF is an inhabitant of the woods, and appears to prefer those whose trees are large and lofty; especially where oak, birch, and aspen trees grow on a surface covered with fern, grass, and other herbage. In very close woods, as of pine and other firs, where the ground is unclothed by vegetation on account of the dark and heavy foliage of the trees above, it is seldom found. In the spring this bird does not wander far from the spot it has chosen; but its singular note may frequently be heard in the same place, and usually appears to proceed from far above our heads. The little singer, on account of its elevation and of its small size, can seldom be seen, as the branches even of a leafless tree are sufficient to conceal it. It is a lively bird and continually in motion. Its note, although it cannot be called a song, is not altogether unmusical. It consists sometimes of only two notes, which have been likened to *chiff-chaff*! whence it has derived its name: but we have heard its cry frequently extended to three notes, each differing from the other, as if it were *chif-chef-chaf*! ringing among the tops of the trees like the chime of little bells.

Montagu speaks of this little bird as the hardiest and most generally diffused of all our summer visitors, and to be found

in all parts of the kingdom where woods or hedges afford it shelter and food. Its note he says is heard long after the hay-bird (or willow-wren of this work) is silent. We have, however, never found it *plentiful* even in places apparently the most adapted to it; we know a few to frequent our own immediate neighbourhood, and but few. With us it is far less common than the willow-wren, if we may judge by the infrequency of its note, and the scarcity of its nest and eggs.

This species appears to avoid low and damp situations, and to prefer hilly country to that which is level. It is mostly found to choose a situation for its nest upon the slope of a hill, among fern, low bushes, and long grass: sometimes it is placed beneath the shelter of the recumbent straggling branches of a bramble, or behind a clod of turf. The shelter of tall trees is mostly sought; but we have found its nest upon the top of a hill, at the distance of many yards from any tree, and hidden only by low bushes of furze. The building-materials of their nests vary according to the locality chosen, and are usually in part constructed of the materials they are placed among, whether fern, moss, or dry grasses; for which reason the difficulty of finding them is much increased.

We usually observe in authors the nest of the Chiff-chaff and willow-wren described as *domed*, but we think a more distinctive word might be used to express their form, namely *hooded*. A domed nest implies a structure entirely covered with a cupola or hollow ceiling; which is indeed the case with the nests of the common wren and the long-tailed titmouse, and within which the eggs are completely concealed: but as those of the Chiff-chaff and willow-wren are only partially covered with a ceiling, we think the term *hooded* more significant of their form. A nest of the Chiff-chaff, now before us, is most perfectly in accordance with this term;

being a spherical structure, covered half the way over with materials similar to the rest of the nest, the other half of the upper hemisphere being entirely open, exposing perfectly to view the eggs within. This description, we believe, will generally accord with the nests of the two last-named species; although varieties doubtless occur, modified by circumstances.

The Chiff-chaff is considered one of the earliest of our summer birds of passage in its vernal migration, and among the last to leave this country in autumn. We are not, however, aware whether this species breeds sooner than others, in conformity with its early appearance; but we do not remember to have met with its eggs before the middle of May. In the middle of June we have found the young birds partly fledged. On the third of that month, passing once along a road shaded by lofty oaks, we heard some small birds making a great deal of noise, as if much disturbed by our presence. On stopping to watch, we saw a little pair of this species flitting among the lower branches of the trees, and alighting upon the palings of the adjoining park. One of our young companions climbed the steep bank at the side of the road to search for their nest, which it was evident must contain young ones, as one of the old birds had food in its bill. The old birds continued to fly over our heads, uttering continually their alarm-cry, *hoo-id! hoo-id!* and occasionally fluttering just above the person of the climber, as if they would by their presence protect their little ones from harm. The anxiety of the parents, which increased as their treasure was approached, caused the nest to be presently discovered. It was near the top of the bank, about eight feet above the road, and bedded in its mossy side among long grass and brambles: only the mouth of it was visible, within which lay seven young birds, partly feathered. The plumage of these little nestlings was greenish brown above, and dull rufous white beneath. After a few days we passed by the spot

again, and all were flown. The nest, which we now secured, was built of dry grasses and green moss, and lined with a few long hairs and a great profusion of feathers. It was hooded over with the same materials; the hood as fully lined with feathers as the cradle part itself.

The eggs of this species, which are very small and delicate, are somewhat short, pointed at the smaller end, and very round at the larger: they have a very thin shell, with but little polish: the ground colour is white, with very fine spots and dots of a blackish red or purple brown, chiefly disposed at the larger end, and sometimes confluent in the zone; they vary very little either in shape or colour. Incubation lasts thirteen days, during which time the male relieves the female occasionally. The young ones are fed with little caterpillars, flies and other insects: they leave the nest early. If the young birds are taken out of the nest and placed upon the ground, the old birds, we are told, will hover over them, and even come and sit beside them. We have witnessed the same thing in fly-catchers, when we have taken

young birds that could not fly, out of the nest and placed them upon the grass; the old birds have come down to them and fluttered over them, as if trying to tempt their young to follow them. Indeed, the solicitude of birds for their young is truly beautiful and interesting: we have seen the nightingale, one of the most anxious of birds, pursue and buffet persons who approached too near the bushes in which her young ones were concealed; in the same manner as swallows and martins will fly close to, peck at, and buffet a tame owl which happens to show itself abroad by daylight.

In this species the tints of the plumage vary very greatly at different seasons. In autumn, after the annual moult, their plumage is as follows:—The head, back and scapulars, and the upper coverts of the tail are brownish olive: the quills and tail-feathers are blackish grey with olive green borders;

the two outer quills and the side feathers of the tail have whitish edges. The edge of the wing and the under coverts of the same are pale yellow. From the nostril extends over the eye a pale yellowish brown or ochre streak; the space between the bill and eye is grey: the cheeks pale brown. The throat, breast, and flanks are pale brownish yellow; the yellow, on close examination, is, on the breast, chiefly disposed in longitudinal streaks: the belly is dirty white. In this plumage the bird has much the appearance of a willow-wren, but the colours are less clean, the olive above being more tinged with brown, and the under plumage of the body not so clearly white and yellow; the former being sullied with dull grey, and the latter colour tinged with ochre. The iris in this species is dusky, the legs dark brown, and the soles of the feet yellowish. The beak is brown, the base of the under mandible flesh-colour, the gape yellow.

In the plumage of the spring and summer, when these little birds are seen building their nests, or attending their young, their colours are so different that they can hardly be detected as the same birds. At these seasons, the green and yellow tints have entirely disappeared: the upper plumage has a uniform tint of mouse-coloured brown, and the under parts appear only dull greyish white, slightly tinged upon the breast with ochre. The male and female are almost entirely alike; the latter a little smaller in size. The young birds resemble their parents in their autumnal dress.

The entire length of the Chiff-chaff is four inches and a half. The bill measures from the forehead nearly four lines. The wing is two inches and a quarter from the carpus to the tip, and the tail extends about nine lines beyond the wings when closed; the third and fourth quill feathers of the wing are the longest. The tarsi measure about three quarters of an inch. The beak is thin, the tip of the upper mandible slightly notched, the nostrils oval, the gape beset with bristles.

The Chiff-chaff is considered by Jenyns to be the *Sylvia rufa* of Temminck, a species widely dispersed over the Continent of Europe, being found in all the southern countries of that quarter of the globe, in some of which, namely Italy and Greece, it remains all the year. Some few are believed to remain in England occasionally through the winter, as they have been met with in the southern counties at all seasons.

The egg of the Chiff-chaff is figured 70.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXXI.

WOOD WREN.

SYLVIA SIBILATRIX. (MONTAGU.)

THE WOOD WREN is found in many parts of England and Wales, but appears not more common than the chiff-chaff; and is far less frequently met with than its congener the willow-wren. Its partiality for country of a peculiar character, renders it local. Like the preceding species, this is also a frequenter of wood and forest scenes, and delights in hilly districts clothed with ancient trees; particularly, as observed by White, where beeches most abound: it is also frequently met with in fir, oak, and birch woods. This is a lively and restless bird, but lonely and unsociable in its habits; and in the spring, soon after its arrival here, it is more often heard than seen, its singular note betraying its presence when the deep foliage, in which it usually resides, conceals it at that season from the observer. But in summer, when constructing its nest or feeding its young, a sight of it is more easily obtained. The usual station of the male is among the upper branches of a lofty tree, from which may be heard its sibilous note at frequent intervals; this note is heard from time to time throughout the summer, and as in the time of incubation the male does not wander far from the spot where his mate is sitting, the vicinity of the nest may be sometimes ascertained by this means. The nest

itself is, however, so well concealed, that except when the birds are passing in and out with materials for building, or with food for their nestlings, the exact spot occupied by it is not detected without great difficulty. The situation chosen for the nest is usually the slope of a hill, shaded by lofty trees, where the rays of the sun are not too much excluded to admit the undergrowth of rich grass and moss, and other similar productions: the twisted roots of a tree sometimes afford in their cavities a convenient shelter, if covered with moss or other low herbage; or a moist and mossy bank.

All naturalists agree in describing the nest as so placed and bedded among the surrounding herbage: the nest itself is also spoken of as hooded over the top, like those of the willow-wren and chiff-chaff, and commonly composed of materials similar to those among which it is placed; such as dead grasses, moss, or fern. The nest is skilfully but not very thickly woven, hooded over, but sufficiently open for the eggs to be seen; the interior is very neatly rounded and deep, lined with the seed panicles of grass, horse-hair, wool, or feathers. The eggs are from five to seven in number, short in form, being almost round; the shell delicate and but little polished. The ground-colour is white, thickly seeded over with dark violet or purple spots, intermixed with pale grey dots, which form a zone round the larger end. In their colouring these eggs differ entirely from those of the two nearly allied species, the *S. hippolais*, and *S. trochilus*, but agree with them usually in the roundness of their form.

The hooded form ascribed to these nests does not, however, appear to be an invariable character, as we have lately met with a nest which we cannot doubt to belong to this species, in which no appearance of a hood could be traced. This nest was taken on St. Anne's-hill in Surrey. It was situated upon the brow of that beautiful hill, near a grove of tall trees. No doubt can exist of its belonging to the present

species, as the bird was sitting on her nest when observed, and the distribution and colours of her plumage were distinctly seen. The nest was placed among the dead branches of an old bramble, shaded above by living stems of the same, in a wild hedge-bank overgrown by honeysuckles and other luxuriant vegetation. The nest, which was very near the surface of the bank, although not resting upon it, was composed of tufts of dry grass with their roots and seed tops, and lined very thickly with fine fibrous roots and a few horse-hairs; it contained four eggs. These are greenish white in the ground-colour, sprinkled over the whole surface with pale reddish brown; a zone of dark grey spots encircles the larger end, and many darker spots of rich brown are mingled with it, and scattered over the rest of the egg. These eggs are of a roundish form, and measure in length seven and a half lines. They weighed when taken about twenty-two grains each. The nest much resembles in size and appearance that of a whitethroat, being but little thicker in substance; but differs in being so thickly lined with roots, and in not being constructed with galium, which almost invariably enters into the composition of the whitethroat's nest. It is singular, that at the time this specimen was taken, another exactly similar in materials and appearance was observed placed on the ground beneath the same bush, a nest of the previous year.

The call-note of this species, which greatly resembles that of the chiff-chaff, is a soft piping note; *hoo-id* or *huid!* *huid!* The same note is also used as the alarm-cry when the nest is approached. This alarm-note, or cry of solicitude, appears common to several birds: it is similar to that used by the nightingale as soon as her young are hatched; but with this last species it is always accompanied with their croaking note, *kurrrr!* Besides this note, the Wood Wren has another peculiarly its own, which distinguishes it from

other birds; this is a note repeated several times, beginning slowly, and rapidly increasing in utterance: it may be tolerably expressed by the monosyllable *dwee!* or *djuce!* It seems not without considerable exertion that these sounds are uttered, as the little singer may be seen with its throat inflated, the feathers of the head and neck erect, the wings drooping, and the little beak directed upwards and vibrating with the jarring expression of the notes thus disengaged. These sounds are uttered with much strength, and may be heard at a considerable distance. This species has been called "the Shaking Bird of the Woods," a title expressive at once of the chief part of its history.

The Wood Wren is in size considerably larger than its two little congeners. On a cursory view, it much resembles the willow wren in its autumnal plumage, but the relative proportions of its wings and tail distinguish it in all states.

The whole upper plumage of this bird is clear olive green, including the head, nape, back, scapulars and upper coverts of the tail. The wings and tail are brown, each feather bordered with a narrow yellow edge: the tertials are more broadly bordered with yellowish white; and the green colour of the back extends over the sides of the breast. A brown line extends before and behind the eye, above which is a streak of bright yellow: the cheeks are yellow, tinged with brown and green. The chin, breast, and flanks are bright yellow, softening into the purest white on the lower part of the breast, belly, and under coverts of the tail. The beak is pale brown, the edges and inside of the mouth ochre yellow. The legs and feet are brown. The upper and under coverts of the tail are very long, and cover three fourths of it. The feathering of the whole bird is very fine and silky. In their plumage, the male and female are exactly alike, except that, when compared together, the dark eyestreak is in the female scarcely so well defined. The iris is rich brown, and the orbits surrounded with yellow feathers.

The young nestlings resemble the parents, but, on account of the loose texture of their feathers, their colours are less distinct and perfect.

The entire length of the Wood Wren is five inches and a quarter. The beak measures four lines and a half, the tarsus nine lines; the tail-feathers measure two inches, but extend only eight lines beyond the closed wings: the tail is slightly forked. The wing measures from the carpus to the tip three inches; the first feather is short, the third the longest in the wing.

On the Continent of Europe the Wood Wren is well known, but is not considered to be anywhere plentiful: it is found in France, Holland, Italy, Switzerland, and Germany, and extends as far north as the middle of Sweden. Its residence in Europe is not so prolonged as that of many other summer birds, as it arrives seldom before May, and departs in August or September.

The egg of the Wood Wren is figured 71.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXXII.

WILLOW WREN.

SYLVIA TROCHILUS. (MONTAGU.)

THE WILLOW WREN is much more numerous as a species than either the chiff-chaff or wood-wren, and, being apparently less shy, it is frequently seen and heard. It is also less local in its habits, and consequently more generally diffused. It may frequently be seen among the lower branches of the trees, on which account it comes more readily within the range of our observation. It may frequently be seen by river sides, especially in autumn, sporting among the osiers and willows that overhang their banks: these localities it appears much to delight in, probably on account of the plentiful supply of insect-food that is to be found near running water. This species is not, however, confined either to willows or their neighbourhood, as its sweet song may be heard in woods, groves, underwood, and hedgerows, on plains or hills indifferently. The familiarity, or disregard of the human race, to be observed in this species, is remarkable: we have often seen it approach within a few feet of us when no attempt was made on our part at concealment. On such occasions we have observed it running up and down the stems and branches of the trees, as if in search of insects, and flitting from one to another, singing the whole time its very lovely song. This little species has been termed the "Liquid-





noted Willow Wren : its voice is, in our opinion, one of the sweetest among birds ; in fact, in the quality of its tones it cannot be surpassed. Although of such diminutive size, this little bird sings as loud as the redbreast, and apparently with great ease, and without raising its feathers or swelling its throat perceptibly. Its song consists of fourteen or fifteen syllables, and is comprised within the compass of about five whole notes of music. It commences with the highest and gradually descends, repeating each note several times. Its voice is clear, full, sweet, and flutelike ; but it appears incapable of varying its song, as it is always to be heard in the same form. To the curious in these things, the following representation may be acceptable ; the song begins hurriedly and ends very slowly ; it seems to express, *Dididide, deay deay, duay duay duay, deay deay, duay, deda deda daa da !*

When captured, this little species appears quite unconscious of fear : one that we surprised upon her nest, and put in a cage, ate immediately all the insect-food that was offered her, and appeared to take not the smallest notice of us or of her captivity : she would not, however, recognise her nest and eggs ; had the young been hatched, her parental feelings would perhaps have been aroused. These little birds bear confinement very well, and may be kept for one or two years. They readily take to artificial food, such as bread and milk, if tempted with a few green aphides scattered upon it, and well repay the care bestowed upon them, as the male sings incessantly. An ingenious method of inducing fresh-caught birds to eat artificial food, has been communicated to us, which appears reasonable. Great difficulty is generally found in inducing strange birds to eat what they are unaccustomed to, unless they can be made acquainted with it by stratagem. For this purpose two or three living meal-worms must be put into a tumbler-glass, and set in a plate or saucer : round the bottom of the glass must be strewed

the artificial food, bread and milk or German paste : the bird at sight of the mealworms will approach the glass, as all small birds are fond of those insects, and attempt to peck at them ; in so doing it will inadvertently taste the artificial food, and by degrees acquire a relish for it. But if a fresh-caught bird is stubborn and refuses to eat it, as the most intelligent kinds frequently do when taken full-grown, the only plan to be pursued is to feed or cram it, as it is termed ; this must be done at least once every hour, and if it be an insect-eating bird, raw meat and chopped egg are the best things that can be administered : at the same time the captive must be kept in a darkened cage. This course should be pursued for at least two days, after which the above-mentioned plan may be practised with success. Insect-eating birds should be occasionally indulged with a mealworm or two, as they are thought to keep them in health ; but, as a constant article of food, these are not sufficiently nourishing for captive birds.

The Willow Wren is restless and lively, and its flight from tree to tree is wavering and irregular. Its call-note is *he-wid!* and during the spring it utters a delicate chirp, which seems to be a note of endearment to its mate. It arrives in this country about the beginning of April and returns in September ; it seldom however sings after July. This species is met with all over Europe ; from Sweden, Finland, and Russia, to the most southern parts. It is also common in North America.

The food of the Willow Wren is entirely insects, such as flies, gnats, aphides, small spiders, &c. When the weather is cold and wet in the early spring, it may be seen on the ground in search of insects, and in autumn occasionally eats elderberries ; but neither these birds nor their two predecessors in this work, enter gardens for the sake of their fruit. If they ever approach near to human dwellings, which they do in retired spots, it is to pick off insects from the fruit-trees.

This species builds its spherical nest either on or very near the ground, choosing a situation where the ground is well covered with some low vegetation. It is sometimes sheltered beneath the branches of a felled tree, or beside a clod of earth, and is in most cases built to harmonize with the surrounding herbage, and hooded over with the same materials, like that of the chiff-chaff. Sometimes it is well concealed; but we have found specimens in which the eggs could plainly be seen in passing. It appears as if in a sheltered spot less care was taken to conceal them; while in a more open situation, such as the hollow of a cart-rut, the nest is sometimes found almost entirely closed, like that of a field-mouse. The structure is tolerably firm, composed of dry grass, moss, dead fern, or leaves; the interior round and deep, lined with horse-hair, wool and large feathers. The feathers chosen are usually those of the partridge, pheasant, or pigeon, and in the vicinity of a farm-yard the feathers of domestic fowls are frequently employed. In the latter end of April, the eggs may be found six or seven in number: they are rather round in form, the shell a little polished, and sprinkled all over with rust-coloured faint marks on a cream-coloured ground. There are supposed to be two broods in the year, the first of which is hatched in the beginning of May. In many nests of the Willow Wren that we have seen, no perceptible difference in the colour or form of the eggs has been observed.

The colours of this delicate little bird are, on the upper parts olive brown, including the top of the head and nape, the back, scapulars and upper coverts of the tail: the greater coverts of the wings and the tertials, hair brown, bordered a little lighter: the quill feathers of the tail and wings, and the secondary quills are brown, with the edges a little lighter. The tail is slightly forked. The wing has the first feather about six lines in length; the second, three lines shorter than

the third and fourth, which are the longest in the wing. A dusky line passes from the base of the beak through the eye, above which is a pale yellow streak; the feathered orbits of the eyes are consequently pale yellow above and below the eye, and dark at the corners. The throat and breast are strongly tinged with yellow upon a white ground, which passes into pure white upon the belly; the flanks are tinged with brown, and the under tail coverts with primrose yellow. The feathered ridge is yellow: the under wing coverts and edges of the quills beneath, silvery white; the rest of the under surface of the quills and tail greyish brown. The cheeks and sides of the neck are tinged with brown. The eye is brown: the beak pale brown edged with ochre yellow: the legs yellowish brown. In some specimens the legs are silver grey, with the soles of the feet buff yellow. After their autumnal moult, the green and yellow tints upon the plumage of these birds is more perfect.

The male and female are very nearly alike: the male a little the yellowest upon the breast.

The young birds are still more yellow after the autumnal moult than the parents, and remain so until after their return in the following spring, their upper parts being olive green, their under parts pale sulphur yellow, with white bellies: their beak and legs inclining to flesh-colour.

The entire length of the Willow Wren is five inches and a quarter. The wing measures two inches and a half from the carpus to the tip: the tail feathers measure two inches, and extend one inch beyond the end of the closed wings. The beak measures four lines from the forehead, and is very sharp-pointed: the nostrils are oval. The legs measure nine lines, and are very slender and delicate.

In these birds the adult moult in July, and the young in August.

The egg of the Willow Wren is figured 72.



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71



72



We have more than once met with a hooded nest, placed upon the ground, and answering in every respect to those of the Willow Wren or Chiff-chaff, but of which the eggs cannot be referred to any known English bird. One of these nests, a most perfect specimen, was taken by us lately on St. Anne's-hill in Surrey. It was placed in a bank by the road side, and so entirely concealed in the exterior part by the moss and dead grass of the bank against which it rested, that it would probably have passed unnoticed, had not the bird discovered it to us by flying off. On approaching the spot, three eggs were plainly to be seen in a nest rather deep, and hooded half the way over only. The bird as it flew off had much the appearance of a Chiff-chaff or Willow Wren, both of which inhabit that locality, but could not be very distinctly seen. We were obliged unwillingly to possess ourselves of the nest without knowing more of its owner, as the place is frequented by many persons, including cow-herd boys, who would soon no doubt have made the nest their own. The eggs differ in all respects from those of the three species last described, in shape, size, and colour: and no other British bird is supposed to build a hooded nest upon the ground. The eggs are white, but with so thin a shell that the yolk gives them an appearance of reddish flesh colour: they are thinly sprinkled, chiefly about the larger end, with large and distinct spots of pure rust; and are of a long egg-shape, measuring eight lines and a half by five lines and a quarter. The nest is rather large, and built of extremely fine dry grass, dead fern, and green moss: it is lined with fine roots, a few hairs, and a very few downy black feathers.

A nest similarly constructed, and containing one egg of the same form and appearance, has been in our possession several years, marked "Unknown."

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

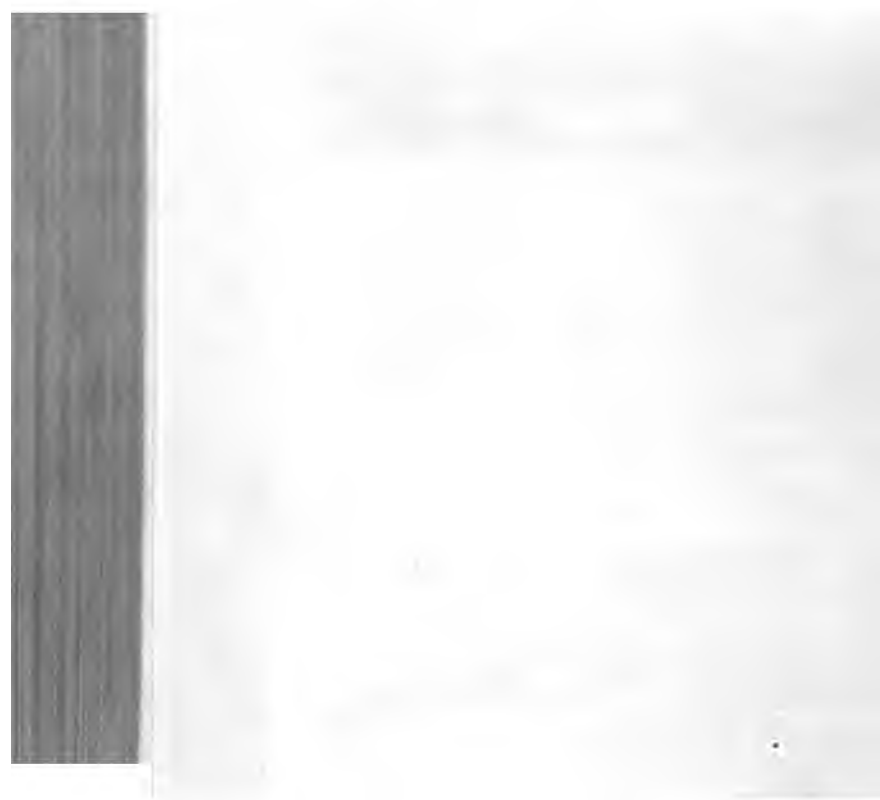
PLATE LXXIII.

GOLDEN-CRESTED WREN.

SYLVIA AURICAPILLA.

THE elegant and lively little bird, which forms the subject of the present plate, is one of the smallest of European birds; but although of such diminutive size, this little species usually braves the cold of winter in this country with impunity, and apparently with indifference. In the coldest weather, in winters of ordinary temperature, they may frequently be seen on the sunny side of a fir-tree, busily employed in searching among the branches for the larvæ of insects secreted in the crevices of their bark; and so earnest are they in the search that they will suffer themselves to be approached, and appear to take very little notice of being observed. They frequently even sing at this season. On the 16th of February, 1843, the coldest day of that spring, we heard a little individual, of this species, singing loudly and merrily in an evergreen shrub, as if in perfect enjoyment. The weather was so severe at the time, that the waters of a neighbouring pond were thickly covered with ice, and many boys were exercising themselves in sliding upon it, and the whole country resisted the impression of footsteps. Although thus capable of enduring the ordinary cold of our climate, these little creatures suffer when a winter of unusual rigour and long duration occurs: at such times they have been found dead, in holes in banks, or hollow trees,





several clustered together, as if they had in vain sought, as their last refuge, the warmth that might be communicated by such a device.

To our own indigenous birds of this species are occasionally added large flights, which arrive in autumn from more northern parts; an instance of which is recorded by Selby, to have taken place on the 24th and 25th of October, 1822: and it is probable that many do annually resort here for the winter, as their numbers are frequently observed, in the north of England, to increase suddenly and considerably.

On the occurrence of a winter of unusual severity, this little species has been known to abandon Scotland, and the north of England entirely: such a circumstance has been recorded, in the memoirs of the Wernerian Society, to have taken place early in the spring of 1833; and to so distant a point did they appear to have continued their migration, that not a single pair was observed in their accustomed haunts until the following October, the usual time for the arrival of autumnal migrants from the north. These birds are found to reside permanently but little further north than our island; they are said to remain in the Orkneys, and are also found to reside in some parts of Germany throughout the year. In hardiness they have, however, the advantage of the redbreast, which leaves these parts in winter.

The summer migration of the Golden-crested Wren is extended northward, as far as the Arctic regions. They are found in Sweden, Norway, Denmark, and Russia, and from thence to the most southern parts of Europe: they also extend eastward to the utmost bounds of Asia. They seem to prefer northern and temperate parts, and are reared in great numbers in the pine forests in the north of Europe. In September and October their migration southward commences: they migrate in large flocks, as may be ascertained by the great flight mentioned by Selby, which was traced

through the whole extent of the coasts of Northumberland and Durham. In their migratory flights, these little birds often associate with the titmice, with whom they have in manners and habits many points of resemblance. In March and April this little species retires again towards the north for the summer months.

The Golden-crested Wren is generally diffused over England, especially in fir woods and plantations; and so strongly is it attached to trees of the fir kind, that it is seldom to be seen in any other; their attachment to trees of this class appears not only on account of their affording shelter at all seasons, which some other evergreens do equally, but the scaly bark of these trees seems to abound with the insects most suited to them; they also feed upon the small seeds of some kinds of fir, which have been found in their stomachs.

These birds are found equally in wild and in cultivated districts, the attraction being always fir-trees; they fearlessly approach houses where such temptation offers, and are often seen in winter to frequent evergreen roses, and other climbers upon porches and trellices in search of insects. They are occasionally seen upon heaths among furze bushes.

In manners these little creatures are restless and lively, gentle, and confiding, exhibiting no signs of fear either when at large or caged. They are fond of society, and are often seen in company with titmice, especially the crested, where this abounds, whose attachment to fir woods is equally strong. The presence of this little bird may often be detected by its note *tzit! tzit!* and when several are together feeding and flitting among the upper branches of a tree, the frequent uttering of this little syllable sounds like whispering. They have, besides, a call-note, resembling *see!* or *shree!* which is very shrill, and not unlike that uttered by the redbreast.

The restlessness of this little bird is so great that it is seldom to be seen but in motion, flitting from branch to

branch, unless when it hangs beneath a fir-cone, pecking at the seeds, or when it sits still for a minute, singing its short and hurried song, which it always seems to utter impatiently and out of breath. In hopping from branch to branch this little species keeps its body in a horizontal position, with its knees bent, but when about to deliver its song it erects itself, and at the conclusion hurries away. "It may occasionally be seen," observes a friend, "hovering, or poising itself upon the wing in pursuit of its ephemeral prey, as the tropical humming birds are said to flutter and attach themselves in a pendant posture, by clinging about the blossom of some flowering plant." Although usually seen about the lower branches of fir-trees, these little birds do not confine themselves to such, as we once shot a Golden-crested Wren from the top of a very lofty elm. The injury it received was slight, and the body of the little creature so light and buoyant, that it came to the ground alive, and though somewhat stunned by the fall from such a height, it presently recovered itself, and was put in a cage with other birds. Here it manifested no sign of fear, and ate readily small aphides, and such other insects as we could procure, and was so perfectly fearless that it suffered its portrait to be quietly taken, and even ate insects from our hands; but as these little creatures are so delicate that the least injury destroys them, it scarcely survived its wound four and twenty hours. When taken under more favourable circumstances, these birds may be preserved alive for a year or two with care: they should be placed several together in a cage, as they dislike solitude, and pine if left without companions.

The little Golden-crested Wren has a pleasing song, short, and hurried, but clear and delicate. It is often heard as early as February, sometimes earlier.

This little bird is the only one among all the British tribes that forms a suspension nest, with the exception of its near

relation, the fire-crested wren, and the golden oriole. It is usually found suspended beneath the extremity of a branch of larch, or spruce fir, chiefly the latter, to the fingers or forks of which the nest is attached.

To commence this pendant cradle, the little architect first attaches a few long grasses to the three or four forks she intends for its support, weaving them securely around their stalks, and forming with them festoons for the outline or frame. Within this skeleton cot she then proceeds to place moss and wool, and other light materials, interwoven with the cots of spiders; and it is then thickly lined with small feathers. The form of this little nest is spherical, and the opening almost invariably at the top. In its general appearance and neatness, it much resembles the nest of the chaffinch; it is about four inches wide on the outside, and two within, and between two and three inches in depth; the brim is drawn in, or narrowed a little, which, together with the depth of the nest, affords security to the young in their otherwise perilous situation, and the horizontal branches of the bough to which it is attached, form concealment and shelter to the whole. So small is this little structure, and so well concealed by its position and the colour of the materials employed, that unless placed in a very conspicuous spot, its chances of escaping observation are sufficient to ensure its general safety. Yet a danger of another character sometimes assails it, from which neither the depth of the nest, nor the apparent security of its position can entirely defend it; namely, a rough and boisterous gale of wind, which, by waving to and fro the supporting branch has been known to dislodge the eggs from their cradle.

The eggs are from six to ten in number, small and delicate, scarcely exceeding peas in size, and measuring frequently not more than six lines in length, and from that to seven and a half. In surface they are mostly without polish; the ground

colour is cream, or sullied white ; some are mottled all over with a darker shade of the same colour, and in others the spots are confined to a zone at the larger end. The young are fed by both parents, who are indefatigable in their task ; they remain in the nest until they can fly. These Wrens breed early, and are believed to produce two broods in the season ; the late broods are seldom so many in number as the early.

The entire length of the Golden-crested Wren is three inches and a half. The wing, from the carpus to the tip, measures two inches ; the first quill-feather is less than half the length of the second ; the second is two lines shorter than the third, fourth, and fifth, which are equal, and the longest in the wing. The bill measures three lines and a quarter from the forehead to the tip ; the nostrils, which are oval, are entirely covered by two stiff bristly feathers, of great beauty, directed forward. The tarsus measures seven lines, and the tail extends nine lines beyond the tips of the folded wings.

The plumage of this species is olive-green on the upper parts of the body, including the sides of the head and nape, the back, scapulars, and upper tail-coverts ; the feathers on the lower parts of the back are the lightest, inclining to greenish-yellow. The quill-feathers of the tail and wings are purplish-brown, bordered with yellow, except near the base of the secondaries, where the omission of the yellow borders causes a dark spot ; the larger and smaller coverts are purple brown, bordered with yellowish-green, and each feather tipped with a large white spot, forming two bars across the wings. The iris is dark brown, the eyelid black ; the eyes are surrounded by a pale dusky ring, around which extends another circle of dull white ; the ear-coverts and forehead are pale yellowish-grey. The chin, and all the under parts are sullied white, tinged on the flanks, and still more strongly on the breast with rufous yellow. The legs and feet are orange-

brown. The top of the head is ornamented with a brilliant crest of elongated feathers of a rich orange colour; this colour is bordered on each side with a stripe of deep black feathers, whose inner webs are pale lemon-yellow. The female perfectly resembles the male in the distribution of her colours, but her crest is paler, and inclining to yellow.

The young birds of the year in autumn resemble their parents in the distribution of their colours, but the green on their upper plumage is strongly tinged with grey, especially about the sides of the head: they are also smaller in size. The beak in adult birds is black: in young ones the base of the under mandible is horn-colour. It is thin and awl-shaped, broad at the base, and narrow towards the tip.

The egg of the Golden-crested Wren is figured 73.



INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXXIV.

FIRE-CRESTED WREN.

SYLVIA IGNICAPILLA.

THE separation of this little bird, as a species, from the golden-crested wren was first made by a continental naturalist, M. Brehm, who communicated his observations to Temminck and other ornithologists; since which period a few specimens have been recognised in England at various times. On the continent of Europe, this species is tolerably common in some parts, although less so than its little congener. The Fire-crested Wren is considered to be most abundant in France and Belgium, but it is found also in Switzerland and in Germany; and it is an inhabitant of North America. Like the preceding species, they remain in Europe, and probably in England throughout the year. They do not, however, winter in Germany; but Temminck says they are constantly to be seen in France in winter, and inhabit the "Jardin du Roi" in Paris at that season.

In manners and habits this species nearly resembles the more common one, the golden-crested wren. Like it, also, this is chiefly found among woods and forests of pine and other firs, and in gardens where such trees abound: its food is the same, and in the localities it frequents there is no distinctive difference. This species is, however, more shy than the gold-crest, and does not associate in such large com-

panies, either at ordinary times, or during migration, being seldom seen more than six or seven together, probably the little family of the year. It is not found so far north as the preceding species; and its times of migration are observed, in parts on the continent where it is well known, to be later in the spring and earlier in the autumn.

These little birds are remarkably restless and continually in motion. The male and female, which are usually seen together, are so much attached to one another, that if one is shot or captured, its companion remains on the spot for a considerable time, uttering continually its call-note. The notes of this little species are said to differ in tone from those of the common golden-crested wren, so that by an accustomed ear they may be readily distinguished.

The number of eggs in this species is from six to eight: they vary in size and colour, as in the former species, which they greatly resemble, being reddish or cream-white in the ground colour, minutely speckled with yellowish-grey about the larger end; they are in size from six to seven lines in length. The nest is built of moss, wool, and a few supporting grasses, and lined with the down of animals and small feathers: it is suspended from a fir-branch in the same manner as that of the gold-crest, and is found in similar localities.

The Fire-crested Wren varies in length, from three and a half to four inches. In a specimen measured by us the dimensions were as follows: the beak from the forehead nearly four lines: the wing from the carpus to the tip two inches one line: the first quill-feather is short, the second two lines shorter than the third; the fourth and fifth are a trifle longer than the third, and the longest in the wing; the tail, which extends about three quarters of an inch beyond the folded wings, is slightly forked: the tarsi measure nine lines.

The chief distinguishing marks of this species are the black

streaks across the face, which have procured for it in France the expressive names of "triple bandeau," and "roitelet à moustaches." These three black streaks are thus disposed: the first extends from the base of the beak to the nape, passing through the eye; the second from the forehead to the back of the head, and bounds the orange crest; the third proceeds from the corner of the mouth and passes beneath the ear-coverts. Between these longitudinal black streaks are two white lines, the one above, the other beneath the eye. The crest is flame red, and the forehead yellowish-brown. The iris is dark brown, the beak black, and the inside of the mouth and tongue orange colour. The legs and feet are yellowish-brown, the soles yellow and rough. The upper plumage is yellowish-olive, including the back and scapulars; the nape and sides of the neck are tinged with ash. The wings and tail are dusky, slightly bordered with yellow; the tertials are more broadly bordered with yellowish-white, except towards the base, where their outer web is dusky black, forming a dark spot. The coverts of the wings are dusky, broadly bordered with greenish-white. The under parts are greyish-white, strongly tinged upon the breast and flanks with buff colour. The under coverts of the wings are pale grey.

The female nearly resembles the male, but her crest and all her colours are paler and less distinctly marked. The young birds may always be distinguished from those of the golden-crested wren, by the bands across the sides of the head. In young birds the colours are more obscure, and the base of the beak is horn-colour. The beak, in this species, is always larger in proportion than in the preceding.

The egg of this species is figured 74.

INSESSORES.
DENTIROSTRES.

SYLVIADÆ.

PLATE LXXV.

WREN.

SYLVIA TROGLODYTES.

THIS well-known species is common throughout Europe, and extends from the Mediterranean as far north as the arctic circle. It is a very hardy little bird, and appears to prefer northern to southern climates. It is quite regardless of the cold of our latitude, and braves the occasional rigour of the winter in this country generally unharmed. In winter it inhabits and shelters itself within holes and caves, among heaps of stones, or hollows formed by the roots of trees, or in the cavernous recesses of old decayed stems. In summer it does not entirely abandon such situations, but appears to have an attachment, at all seasons, for places sombre and lonely. It also inhabits woods and plantations, where there is plenty of sheltering underwood, and low bushes and hedgerows, and is often seen in the neglected corner of a cottage garden. Wherever this little creature resides it is fond of concealing itself, and as the dead foliage and vegetable rubbish, amongst which it often creeps, nearly assimilate with it in colour, it is only to be discovered by its exceeding restlessness. It is a solitary species, never associating in flocks, and seldom, except in spring, to be seen even in pairs.

This light-hearted little bird is lively and intelligent,



1. The first part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

and readily sensible of danger ; on the least alarm it hastens to hide itself from observation with the greatest possible speed : its hops or leaps are mostly executed with the tail erect, and follow in such quick succession that its flight through the intricacies of a bush or hedge has a great resemblance to the running of a mouse. When a bird of prey appears, the little wren often gives the alarm, by uttering rapidly its note of fear, *shrek ! shrek !* so quickly repeated, that it sounds like a miniature watchman's rattle ; this is usually accompanied with a curtsying, or dipping motion, in the manner of the redbreast.

The flight of the Wren is performed in a straight line, fluttering incessantly its short rounded wings ; it seldom performs any longer flight than from bush to bush, or across an open grass plat, and usually near the ground, as if conscious of its imperfect powers.

The Wren sings occasionally at all seasons, but least in the autumn. Early in spring its lively song may be heard suddenly to break forth in a clear and cheerful strain : its voice is very strong for so small a bird, more than equaling in strength that of the redbreast. It appears usually to sing one stated succession of notes, or at most exhibits but little variety. In the performance of its song the whole body of the little vocalist vibrates, the bill is raised and opened wide, the throat enlarged, and the wings drooping. While singing, the little bird frequently sits upon the upper branch of a hedge or bush, and when the song is ended precipitately descends.

This little species rears its young throughout the greater part of Europe, as far northward as Sweden. Its nest is variously placed, and at very different elevations ; it is sometimes found upon the ground, and occasionally as high as twenty feet above it, as opportunity offers. In the situation chosen for it great variety also may be observed. Some

are placed in holes in buildings, or under thatched roofs; some among piles of wood or faggots, some in a hay or corn-rick, or among the exposed roots of trees; some are placed against the trunks of large trees, and others upon the ground among fern or brambles. Concealment for their nest does not appear to be much sought after, as it is often to be found beside a high road, where the little builder is disturbed by every passer. One thus circumstanced we have lately seen built in a hole in the top of a low pollard by the river side, in the most frequented spot in the village, where every fisherman and every idle boy was in the habit of passing. The anxiety this appeared to cause to the little birds was extreme; every minute their attention was distracted from their young, and their vociferations were incessant, as if they thought that every one's business and convenience should give place to theirs.

The nest of this species is well constructed and very curious, and remarkably varied in form and structure, to suit the locality selected. When the stem of a tree is chosen, the manner in which the little builder commences the work is exceedingly ingenious. The first indication of the future nest is a slight circular outline traced upon the stem, by means of a few slender grass stalks attached to the rough bark, generally of the elm, which tree appears favourable for such an undertaking, on account of the slender branches, or spurs, that spring at right angles from its stem, and are sometimes used to attach the external parts of the nest to. This slight circle may be observed for some days nearly in the same state, so slow is the progress made in this stage by the builders. By degrees a few more grasses appear within the outline, and a little moss, but these little creatures will seldom suffer any one to see them at work; on the contrary, they jealously watch until any intrusive passenger is out of sight; thus ten days or a fortnight are

sometimes employed in the construction. The nest when complete is spherical, except that the side attached to the stem is flattened. The opening for passing in and out is in the upper half, below the dome, and is nearly closed by the feathers with which it is lined.

The constructing materials of the nest are flexible grass stalks, dead foliage, and green moss, of which the principal part consists. When built upon the ground, the form of the Wren's nest differs considerably, and displays less ingenuity of contrivance, in proportion to the lesser need. A nest of this description in our possession is so much like that of a willow-wren, that it might, if empty, be mistaken for one. It is externally composed of dead fern, with a small portion of long green moss, interwoven with a few long flowering stems of grass, and lined with feathers.

Another nest in our possession, is of less common construction : this is suspended beneath a branch of spruce fir, in the same manner as that of a golden-crested wren ; not, however, from the extremity, but from the centre of the branch. It is attached to the foliage of five or six pendant sprays by the long trailing branches of several sorts of wild geranium, or cranesbill, a material well adapted for binding the branches together ; long grasses also appear in the structure, and dead leaves of various kinds, together with a little green moss. It is lined with skeleton leaves and a few roots, but no feathers. This nest is fully six inches long externally, and five inches in width. The width within is about three inches, and the depth rather more. The thickness of the nest varies from one to two inches, and in substance it is very firm, especially beneath and around the entrance. This nest contains four eggs, but sometimes as many as eight are found.

The eggs of this species present very little variety, either in form or colour ; they measure usually eight lines by six ;

they are circular at the larger end, pointed at the smaller. In colour they are reddish-white, but fade to pure white when preserved: minute, dark crimson spots are sprinkled over the surface, and are rather more numerous at the larger end: the shell is very thin and polished.

The entire length of the Wren is scarcely four inches: the wing measures from the carpus to the tip one inch nine lines: the tail one inch two lines, and extends about half an inch beyond the tips of the wings. The beak, from the forehead to the point, is four and a half lines; the tarsi measure seven lines, and the middle toe and claw the same: the hinder toe and claw, which are strong and thick, measure together half an inch. The wing is much rounded; the first quill-feather measures eight lines, the second one inch two lines, the third one inch four lines, the fourth, fifth, sixth, and seventh are nearly the same length, and the longest in the wing. The tail-feathers are even in length, except the outer ones, which are two lines shorter than the rest: the upper and under coverts hide more than half the tail.

The whole upper plumage of this little bird is reddish-brown, marked on the back and scapulars with transverse dusky bars. The coverts of the wings and tertials, and the tail, are rather more rufous in colour, and similarly barred: the quill-feathers of the wings are dusky, barred on the outer web with reddish-white, which gives a tessellated appearance. The under parts are pale reddish-brown, lightest on the chin and throat, and darkest on the flanks and under-coverts of the tail, which are barred with dusky-brown. The legs and feet are light brown. The beak is rather long and slender, and rounded at the tip; it has no perceptible notch in the margin. The upper mandible is dark brown in colour; the under one dark only at the tip, and pale brown at the base.

To show how small in bodily substance this little bird is, we mention the following fact. We once captured a Wren,



73.



74.



75.



10

and, wishing to observe its manners, designed to keep it for a few days in a large wire cage. Accordingly we introduced the little creature in at the door : it had scarcely released itself from our hand, when we heard it strike itself against a window at the other end of the room. Hardly believing that it could so readily have escaped through the wires of the cage, we repeated the experiment : the result was the same ; and we found that this little creature could fly through a cage whose wires were placed at the distance of only five lines, or little more than the third of an inch from one another, without appearing to be even obstructed by them.

The egg of the Wren is figured 75 in the plate.

*INSESSORES.
DENTIROSTRES.**PARIDÆ.*

PLATE LXXVI.

GREATER TITMOUSE.

PARUS MAJOR.

THE present species is the largest of its family, and very generally known. It is distributed all over Europe, and is more numerous in the colder regions than in the warmer, extending as far north as the utmost bounds of the forests. It is also found throughout Asia. In these vast regions the Titmouse is indigenous, and in most of them some are found to remain nearly throughout the year, but the greater part migrate from their extreme northern boundaries in autumn, and their numbers are found greatly to increase in the temperate regions at that season. This movement is caused by the impossibility that these and other granivorous birds find of obtaining a sufficiency of food in the north, when the ground is covered by snow, or so hardened by frost that their chance of subsistence would be small.

In England, their migratory movements are but little perceived, but on the vast continent of Europe and Asia, where the different seasons are far more distinct, the migrators may be seen, during September and October, flying in great numbers from north-east to south-west, apparently hurrying along, as if to overtake one another. It is generally remarked, and with truth, that these birds do not return in spring northward, in such great numbers as they passed southward in autumn, many having doubtless fallen a prey



Pl. 78

1. The first part of the document is a list of the names of the persons who have been appointed to the various offices of the city government.

to men, and animals, and birds of rapine, besides various other casualties. They return during March and April, and from that time are only found in pairs in the woods. In Holland, where these migrations also take place, they are taken in great numbers in autumn, by birdcatchers, when on the watch for other birds.

These birds are found alike on hills and plains, provided the character of the country is sylvan. Their habits are restless and busy in the extreme, and they are very rarely seen sitting still for any length of time ; and although they do not want for courage, they have the sagacity to avoid any place where they have met with danger or disturbance, for which reason they seldom construct a second nest in a spot from which their first has been taken, although, when undisturbed, they are known frequently to return, and build again in the hole or sheltered corner in which they have brought up their brood of the preceding year. They fight and quarrel much with their neighbours, even at large, but when caged they are dangerous companions to other small birds, whom they pursue and harass, and on the first opportunity destroy, by striking them on the head with their powerful bills, and then feasting on their brains. The flight of this species is rather laborious, performed in inverted arches, and low when passing only from tree to tree ; but they fly higher in the air when on their migratory passage.

The food of the Greater Titmouse consists of seeds, fruits, insects and their larvæ, and, like most other birds, their chief occupation is seeking for it : for this purpose they are indefatigable in their investigations among old trees, which afford so many hidden retreats for them in their cavities and bark. In winter they frequent orchards, much for the same purpose ; also farmyards, for the sake of the scattered grain.

The nest of this species is invariably placed in a hole in a tree or wall, or in a crevice of a rock, and its construction

depends much on locality and circumstances, as regards form and proportions. It generally consists of moss, grass, and stalks, and is lined with wool, horse or cow's hair, and feathers, and generally loosely put together. We lately saw a nest of this species, taken under rather curious circumstances. A young companion with whom we were walking, observed that he knew where there was a nest, as he had seen a bird drop from the trees above into a hole, which he pointed out, in a stump imbedded in the bank by the road side. He climbed along the bank to it, and found that the hole, which was in the remains of a felled tree, was too small to admit the entrance of his hand; consequently, he put in a stick to feel what might be within, and, finding something soft, he twisted the stick, in the manner boys do to get a nest out of a narrow hole, and succeeded in bringing up a nest composed of wool and grasses, and having two eggs entangled by the process in its folds. Encouraged by his success, he then with his knife enlarged the hole a little, and put in his hand as far as he could reach, and just within his arm's length he felt more eggs at the bottom; after having succeeded in bringing out eight more, one by one, he felt something running up his arm, and drawing it hastily out, he saw the tail of a bird, which was endeavouring to conceal itself in a side recess in the old stem. The affectionate little creature had, therefore, remained until all her eggs were taken away, and even then would not leave the spot, but suffered herself to be taken prisoner with them, although she might easily have made her own escape. We set the parent at liberty, but thought, after the alarm she had had, it was in vain to replace the nest and eggs with any hope that she would again return to them. This nest is an exceedingly well built one, composed of tufts of dry grass with long flowering stems, and green moss externally, and lined with wool, and hair, and rabbits' down.

The eggs of the Greater Titmouse are of a short oval form, eight lines and a half long, and six and a half broad ; they are white, with very little polish, freckled with many pale lilac and reddish-brown spots over the whole surface ; rather fullest at the larger end. The young birds, after they can fly, follow their parents for a considerable time, and are carefully fed by them ; they may sometimes be seen sitting upon apple and other fruit trees in an orchard, waiting for the expected supply of food ; they sit shivering, in the manner of other young birds, with their wings drooping, and uttering a shrill cry, like *shreep ! shreep !* The parents, whose note, when so engaged, resembles *tsip !* seek for their food among the mossy branches and curled leaves, and appear to bring them small caterpillars. The young birds may, for some time, be distinguished from the old ones by their smaller size and duller plumage. The roosting places of these birds are usually holes in walls or trees, or beneath the tiles of roofs, where a broken corner gives them admittance, and they often roost several together.

The notes of this bird are various. Early in spring he is heard to say *eeclu ! eeclu ! eeclu !* and by degrees adds many more words to his vocabulary. Among them are *stitty ! stitty !* and *britty ! britty !* he also says *silseeda !* and, when surprised or in fear, pronounces *seeterrrr !* and *pink, pink, pink !* like the chaffinch, but in a louder tone and more frequently repeated, the chaffinch seldom saying it but once, or, at most, twice at a time. But his favourite note is *seedidip ! seedidip !* which is pronounced with such rapidity and so many times in succession, that the bird is out of breath, and all his hearers are in the same condition. The notes are all in a high key, sharp and metallic.

The entire length of the Greater Titmouse is nearly six inches. The wing measures, from the carpus to the tip, three inches ; the first quill-feather is narrow and pointed,

and less than half the length of the second; the second, which is also rather pointed, is four lines shorter than the third; the fourth and fifth exceed the third a little, and are the longest in the wing. The tail extends beyond the closed wings about an inch and a quarter: the tail-feathers measure two inches and three quarters, and the upper coverts hide about one third of their length. The tarsus measures ten lines: the toes are rather strong, and the claws thick. The beak measures five lines from the forehead, and is strong, thick, and broad; the edges of the lower mandible fit into the upper. The nostrils are covered with strong, bristly feathers.

The piebald plumage of these birds is very striking and handsome: the colours of the adult male are as follows. An entire glossy black hood covers the head; the chin and throat are of the same colour, and a broad black band descends from the throat, down the middle of the belly to the tail. The cheeks are white, bounded by another black band: the sides of the breast and flanks are dull yellow. The back and scapulars are olive green; the lower part of the back and upper coverts of the tail fine bluish-grey; the lesser coverts of the wings the same: the greater coverts are bluish-grey, edged with the green of the back, and broadly tipped with white. The primary quills are greyish-black, edged with fine grey, except the first two. The secondaries and tertials are black, edged with greenish-white. The outer tail-feather is greyish-black on chief of the inner web, the outer web and tip white; the rest of the tail-feathers are black on their inner webs, and slate colour on their outer. The beak is blackish-horn-colour, with lighter edges and tip: the iris is dark brown: the legs and feet are slate colour.

The female is not by far so brilliant in colouring. The white patch on the cheek is less clear; the black on the head and breast is duller, and extends only half way down the

breast ; it is also narrower. The young male has the black streak down the breast and belly narrower than in the adult male, but continued all the way. The moult of these birds takes place in July and August.

The characters of the genus *Parus* are ; bill short, strong, subconical, slightly compressed, without any notch ; nostrils basal and round, hidden by short reflected bristles ; tarsi strong ; hinder claw the longest : wings with the first quill moderate, the second shorter than the third, the fourth and fifth the longest.

The egg of the Greater Titmouse is figured 76.

INSESSORES.
DENTIROSTRES.

PARIDÆ.

PLATE LXXVII.

BLUE TITMOUSE.

PARUS CÆRULEUS.

THE present species inhabits all Europe, with the exception of the most northern parts: it prefers moderately hilly to mountainous countries, and frequents leaf-clad trees, in preference to pines and firs. In the spring these birds are seen in pairs, and afterwards in families: towards autumn they collect in flocks, but not in such numbers as the foregoing species. It requires hardly to be mentioned, that the Blue Titmouse remains with us the whole year, and is continually seen in shrubberies close to our windows, particularly during the winter season. They associate much with the golden-crested wrens and creepers; but these are not so familiar, and do not generally approach so near to habitations. In temper the Blue Titmouse is quarrelsome and cruel, frequently biting and pursuing other small birds, with erected crest and attitudes of defiance. Among the branches of trees this little creature is very nimble, climbing and hopping from bough to bough, and clinging in a variety of attitudes: it seldom descends to the ground, all its habits being arboreal. Its flight, when continued to a little distance, is rather unsteady, especially in windy weather.

On the continent of Europe, many of these birds migrate

towards the south in autumn ; driven from the inhospitable regions of the north by cold and hunger. They begin their course in September and October ; and travelling through forests and woods, pass through the centre of Europe. In the spring they return by the same route, and spread themselves again over the north.

The natural food of these birds consists of grain, and insects of almost every description. In spring and summer they principally consume small caterpillars, moths, spiders, etc., and their larvæ, which are found under the leaves, and on the bark of trees. During autumn and winter, their principal occupation is seeking for the concealed eggs of insects, for which they often frequent fruit-trees in orchards ; and although in this search some mischief may be done to their buds, this is far more than compensated by the destruction of innumerable stores of eggs, ready to come forth in the first warm days of spring, to commence their much more destructive ravages. Seeds of berries, and the kernels of beech mast, they are also partial to. Nor does this wide range include all that the Blue Titmouse is fond of ; for we have often seen it feasting among joints of meat in a village butcher's shop, even in summer when food is plentiful ; and on watching for what purpose it came there, we have seen it pick out carefully the fat by preference. Possibly they may also be of service in a butcher's shop, as well as among apple-trees, by destroying the large flies that frequent such places, and the eggs produced by them.

The Blue Titmice are very expert in snatching food from beneath brick or net traps set in winter, and we have often seen them take a piece of bread, or grain of corn, and fly up into the trees with it ; on which occasions the sparrows and chaffinches, who are generally too cunning to venture under themselves, sometimes follow, and by their superior strength, take it away from them. The greater titmouse does not suffer himself to be so treated.

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towards the south in autumn ; driven from the inhospitable regions of the north by cold and hunger. They begin their course in September and October ; and travelling through forests and woods, pass through the centre of Europe. In the spring they return by the same route, and spread themselves again over the north.

The natural food of these birds consists of grain, and insects of almost every description. In spring and summer they principally consume small caterpillars, moths, spiders, etc., and their larvæ, which are found under the leaves, and on the bark of trees. During autumn and winter, their principal occupation is seeking for the concealed eggs of insects, for which they often frequent fruit-trees in orchards ; and although in this search some mischief may be done to their buds, this is far more than compensated by the destruction of innumerable stores of eggs, ready to come forth in the first warm days of spring, to commence their much more destructive ravages. Seeds of berries, and the kernels of beech mast, they are also partial to. Nor does this wide range include all that the Blue Titmouse is fond of ; for we have often seen it feasting among joints of meat in a village butcher's shop, even in summer when food is plentiful ; and on watching for what purpose it came there, we have seen it pick out carefully the fat by preference. Possibly they may also be of service in a butcher's shop, as well as among apple-trees, by destroying the large flies that frequent such places, and the eggs produced by them.

The Blue Titmice are very expert in snatching food from beneath brick or net traps set in winter, and we have often seen them take a piece of bread, or grain of corn, and fly up into the trees with it ; on which occasions the sparrows and chaffinches, who are generally too cunning to venture under themselves, sometimes follow, and by their superior strength, take it away from them. The greater titmouse does not suffer himself to be so treated.

In March, or April, the Blue Titmouse begins again to construct its nest in the place it inhabited the foregoing spring, provided it has not been destroyed by the axe of the woodman, or the insatiable demands of the cottager's wife for firewood, the chosen spot generally being a hole in an old dry stump of a tree, or in a branch partly decayed; and usually a few feet from the ground. Old apple or pear-trees, willow stumps, half decayed oaks, etc., are often chosen. The place usually preferred to receive the nest is a hole, narrow at the entrance, sufficient only to receive the bird, but wider within, where it is often scooped out and prepared by the builder itself with its strong and sharp bill. The structure of the nest depends much upon the place in which it is situated: if the hole is small, the nest consists only of a few feathers or tufts of hair; if large, the foundation is of moss, grasses, and wool; the nest is well constructed, and lined with hair. The number of eggs in early nests seldom exceeds eight; and in later, or second broods, seldom more than six are found. It is said that although this bird returns year after year to the same spot to build, it does not for a second brood inhabit the same hole, in which the first, or spring family, has been brought up. The Blue Titmouse is also very tenacious of her eggs, and will scratch and bite sharply any one who is venturesome enough to put his hand into the hole where she sits.

The most common note of the Blue Titmouse is *zit! zit!* which it utters very frequently, apparently for amusement; or it may be a sort of family, or gathering note, to keep the little party together; it is continually interchanged among them, when several of these little creatures are seen flitting about and feeding together; it also says *tzitee!* Its true call, or pairing note is *tsee! tsee! tsirrr!* very quickly repeated. There is little inducement to keep birds of this genus in confinement, as they have no song, and no habits

of sociability. This species also requires to be kept alone, and must be provided with a cage entirely of wire, as they soon, with their powerful beaks, destroy wood-work in their incessant attempts to recover their liberty.

The entire length of the Blue Titmouse is four inches and a half; the wing measures from the carpus to the tip two inches and a quarter, and the tail, which measures nearly two inches, extends an inch beyond the tips of the closed wings; the tarsus is eight lines in length; the beak four lines from the tip to the forehead, and in form short and conical.

The variegated plumage of this species is as follows. The crown of the head is blue, lightest near the forehead, and darkest towards the nape, surrounded entirely by a white band; beneath this white band passes a dark bluish-black line, which commences at the nostril, and passing through the eyes, extends to the back of the head; the cheeks are white, bounded by a dark blue band, which commences at the corner of the mouth, and passes backwards to the nape. The feathers of the back and scapulars are glossy canary green. The coverts of the wings are deep bright blue, the larger tipped with white, forming a distinct band across the wings; the quill-feathers are blackish, the secondaries edged with bluish-green, and the tertials tipped with dull white; the tail is blue, and slightly forked. The under plumage is sulphur-yellow; the chin is deep bluish-purple, from which a band of the same colour extends down the middle of the belly; the legs and toes are bluish-grey.

The female nearly resembles the male, differing only in having her colours less bright and distinct, and the dark band down the centre of the body less prolonged.

The young birds have the same distribution of colours, but they are much duller, and tinged with grey. During their first autumnal moult, which takes place in August, the colours of the nestling plumage and the feathering of the adult

are curiously mingled ; the cheeks and circle round the crown are yellow, mottled with new white feathers ; the top of the head, which in the nestling is greenish smoke colour, is beginning to be speckled with the bright blue feathers that distinguish that part in the adult ; the dark eyestreak and collar are smoke colour, and the beak dark horn, edged with white. The young male at this period has but a very slight indication of the dark band down the body, and in the young female it is entirely wanting.

The egg of this species is figured 77 in the Plate.



INSESSORES.
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PARIDÆ.

PLATE LXXVIII.

MARSH TITMOUSE.

PARUS PALUSTRIS.

THE present subject is hardly larger than the blue titmouse, and is short and stout in form, and plain in plumage. The Marsh Titmouse is common throughout most parts of Europe from south to north. In Sweden, Norway, and Russia, it is very common, as also in Holland and Switzerland; and it is found equally in the northern parts of Asia and of America.

In Britain this species is indigenous, and resident throughout the year. During summer their chief resort is under-wood, particularly near water or springy spots; they also frequent osier beds by the river side, and are found among tall reeds and water-plants. In winter they are chiefly seen in bushes, plantations, gardens, and orchards, in the vicinity of towns and villages, and approach fearlessly the habitations of men, even among hills and mountains, which they do not so much frequent at other times. These birds are seldom seen in the upper branches of tall trees, but mostly reside in the lower branches, in bushes, or copsewood. Their roosting-place for the night is generally a hole, so small that they can but just enter. In manners these little birds are quick and lively, and appear to be of a cheerful, happy, and affectionate disposition. During the early part of spring a little pair may

be seen to hop about among the branches of a low tree for some time, seeking for food, and when one of them has met with a morsel, it will approach its mate with it, while the other opening its beak and shivering like a young bird, utters the nestling's note and receives the offered donation. This little species is so constantly seen in pairs, that it is believed to choose its partner for life.

Like all other titmice, the monosyllable *tsit ! tsit !* is one of the call-notes of this species during all occupations ; and from the frequency of its repetition we think it not improbable that this genus has derived its popular name of Tit, or Titmouse. They have also many other notes, such as *spit ! spit ! dea ! dea !* also *ailtz ! ailtz !* which is said to be their call in the pairing-season. Many of the notes of the Titmice are highly musical, but their performance of them can scarcely be called a song, as it is frequently confined to two notes, uttered alternately, sometimes slowly, sometimes with great rapidity. The gathering cry of the Marsh Titmouse is of this description ; it consists of two notes, of a rich metallic sound, which seem to express *huid-gee*, or *æitjæe*, uttered many times in succession. Towards the end of summer we have seen little parties of six or eight of this species, flitting together in lofty fir-trees, uttering frequently this metallic cry ; and we have noticed that they appear to delight in sultry weather.

The food of the Marsh Titmouse is seeds and insects. During spring and summer they consume innumerable insects and their larvæ, from the leaves and buds of trees, as well as from their branches and bark. In autumn and winter seeds and berries, and the eggs of insects are sought after. The seeds of sunflowers are a favourite food, also hemp-seed, spinach and lettuce-seed, and the seeds of many garden flowers ; they will also eat oats, and, like the blue titmouse, they are fond of flesh.

Of all this family none is so pleasing and amusing as the Marsh Titmouse when caged, or kept in a large aviary. When first caught, ants' eggs and elder-berries should be given them, but for a constant food the best is the seed of the sun flower.

The Marsh Titmouse breeds among low bushes and trees of no great elevation, generally near water, in osier beds and willow plantations. The nest is always placed in a hole, at various elevations from the ground ; the most frequent place is the crown of a pollard-willow, which is sufficiently soft to allow the little birds to hollow out a place large enough for their nursery. " We have seen it," says Montagu, " artfully excavating the decayed part of that tree, and carrying the chips in its bill to some distance ; always working downwards, and making the bottom, for the reception of the nest, larger than the entrance." The hole of entrance is generally perfectly circular, and so small as only to admit the ingress and egress of the parent bird. Under such circumstances the nest consists only of a few hairs and tufts of wool ; but if the cavity selected is of sufficient dimensions, moss, and grasses, fibres of roots, and bark, with wool and hair, are carried in, in considerable quantities.

The eggs of this species are from eight to twelve in number, and may be found in May ; they are hatched after thirteen days' incubation, in which both parents assist. The young birds are fed with small caterpillars, and the labours of the parents are incessant, in order to supply so many mouths. The parents show great attachment to the young, as well as to each other ; as a proof of their affection, if one of a little family is caught and placed in a cage as a call-bird, all the family flock around, and all may successively be made prisoners. Second, or late broods seldom exceed six in number.

The Marsh Titmouse is four and a half inches in entire length : and weighs about two and a half drams. The wing

measures from the carpal joint to the end of the longest quill-feather two inches four lines: the tail two inches two lines; the beak measures three lines from the forehead to the tip, and is conical and very blunt; the nostrils are covered by very stiff, black hairs, directed forward. The wings have the first quill eight lines in length; the second, one inch five lines; the third, two inches three lines; the fourth, fifth, and sixth, exceed the third by about one line, and are the longest in the wing: the tarsi measure eight lines.

The plumage of this little bird, although less striking than that of most of its congenors, is very pretty. The whole head is covered with a jet black hood, which includes the forehead and nape. The cheeks are white, as are also the reflected stiff hairs that extend from the eye to the corners of the mouth: the chin is black. The back and scapulars are rusty grey, lightest on the upper coverts of the tail: the tail and wings are dusky, edged with the colour of the back. The under plumage of the body is dull white, strongly tinged on the breast and flanks with buff colour.

The iris is dark brown: the legs and toes bluish-grey. The under coverts of the wings are cream-colour; the under surface of the wings and tail feathers pale slate, with white shafts.

The female and young so nearly resemble the adult male, that one description will suffice for all.

The egg of this species is dull white, without any polish; it is very minutely speckled over with reddish brown spots, chiefly around the zone at the larger end. The eggs of all our indigenous titmice have a marked character, which distinguishes them from those of the wren, the creeper, and the chiff-chaff; they are more unpolished in surface, the markings are paler, and often rough or angular in form, instead of smooth and round. A representation of one will be found figured 78.



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DENTIROSTRES.

PARIDÆ.

PLATE LXXIX.

COLE TITMOUSE.

PARUS ATER.

THIS species is the smallest of the British Titmice, and one of the most lively and familiar. It is of frequent occurrence, and widely distributed throughout the northern hemisphere. It is generally to be seen at all seasons, but in the winter especially it may be observed, as at that time it approaches nearest to inhabited dwellings, and may be seen among the leafless trees around them, busily searching for its food.

The Cole Titmouse is distributed over Europe, Northern Asia, and North America, as far north as vegetation exists in the form of trees; it is common in Sweden, Russia, France, and Germany, as well as in our own country. With us these birds are indigenous, but like most others of their kind, their numbers are increased in the autumn by migratory flights from the north, impelled by change of season and consequent want of subsistence. These return again in the month of March towards the north. These travellers are only on their progress during the day, skirting woods or thickets, where such are to be met with, and are seldom seen in open or unsheltered spots.

The localities chosen by these birds are chiefly pine and fir forests and woods, both in hilly and in level country; Scotch fir plantations they are especially fond of. They live

in pairs, and are generally seen in the tops of the trees while the weather is mild. During cold and wet weather they come down upon the ground, and visit gardens and orchards, where they may be seen in numbers during autumn and winter.

The habits of the Cole Titmouse much resemble those of the other species, being always in motion in search of food, which consists of seeds, particularly those of the fir-tribe, and insects. They may be seen searching about in all the crevices of the stems and branches, to the tips of which they hang themselves; and the cones are investigated very closely. These birds are also very fond of the seeds contained in service berries. Caterpillars and large insects they trample under their feet, before they begin to feed upon them; the smaller insects they consume entire, as well as the eggs and larvæ. When they obtain a seed from the cone of a fir-tree they carry it to a convenient branch, where they take the kernel out of it while holding the pod with their claws. They are also very skilful on the ground in searching for the seeds of the pine, &c. Where they find plenty of these seeds, they are said to hoard them up, and secrete them behind the bark of trees, or in crevices in the wood, and fetch them out when they are in want; and this is most probably the case, as it accords with their manners when caged, when they have been seen to hide a portion of their food, and frequently to look whether it was still where they put it.

The flight of this species is unsteady, and resembles much that of the other Titmice, fluttering with their wings in the manner of a moth.

The nest of the Cole Titmouse is always placed in a sheltered position; sometimes it occupies a hole in a decayed tree, at a little elevation from the ground; sometimes it is found in a deserted mouse or mole-hole, or in a hole in a

wall or crevice in a rock, usually in the neighbourhood of forests or woods of pine or fir. The materials consist chiefly of short green ground moss, and the nest is lined with the hair of small quadrupeds, sometimes intermixed with feathers. The female deposits in this warm little cavern her six or eight eggs, of the size, shape, and colouring represented in the plate, No. 79. Incubation lasts about a fortnight, and the male and female sit by turns: the young, when hatched, are fed with small green caterpillars. These birds have two broods in the year, the first of which may be seen on the wing about the middle of May.

The usual note of the Cole Titmouse is much like that of the foregoing species, being *zit! zit!* and the call-note is like *zit-tee!*

To close the history of these little birds, let us, finally, point out their great utility in destroying a vast number of insects, hurtful to forest-trees in general, which, if not kept within due limits by these and many other of their fellow agents, would rob the woods of their freshness and verdure.

The entire length of the Cole Titmouse is four and a half inches. The wing, from the carpus to the extremity of the longest quill-feather, is two inches and a quarter in length; the first quill-feather measures nine lines, the second one inch and a half; the third exceeds the second by about three lines, but is scarcely so long as the fourth, fifth, and sixth, which are the longest in the wing. The tail measures one inch eight lines, is slightly forked, and extends four lines beyond the tips of the folded wings. The beak, which is longer and thinner than in the Marsh Titmouse, is in length four lines from the forehead to the tip, and covered at the base with stiff reflected hairs, which conceal the nostrils. The tarsi measure scarcely seven lines, and the feet are rather stout.

The elegant plumage of this little species is as follows:

the bill is dark horn colour, lighter along the edges, and transparent at the tip; the top of the head is entirely covered with a hood of shining bluish-black feathers, which, encroaching a little on the mantle, gives the head an appearance of greater size; the chin is also black; and the characteristic white spot, which distinguishes several of the Titmice, occupies the nape. The cheeks are pure white, bordered below with a narrow black band; the middle of the breast and belly are white; the sides of the breast, the flanks, and under coverts of the tail delicate buff colour. The upper part of the back and scapulars are ash-colour, tinged with hoary green; the lower part of the back and upper coverts of the tail are strongly tinged with brownish buff. The larger and lesser coverts of the wings are dark ash-colour, each feather tipped with a round white spot, forming two bars across the wings; the tail and wings are dusky, edged with the hoary green colour of the back; the tertials tipped with white. The tail-feathers beneath are dusky grey, with white shafts; the under surface of the quill-feathers are the same, with white edges on the inner web; the under coverts of the wings are greyish-white. The tail is slightly forked, and all the feathering is loose, and silky.

Between male and female there is very little difference in plumage: the latter is rather smaller, and the black on the head less glossy, and not extending so far down, and the white is not so pure. The young resemble the adult female. The nest feathers of the young, before the first moult, have a general tinge of green in them; and the soles of their feet are yellow. There is no variation in the plumage of this species at any particular period of the seasons, with the exception of a brighter polish on the new feathers, after the autumnal moult.

The egg of this species is numbered 79 in the plate.



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DENTIROSTRES.

• *PARIDÆ.*

PLATE LXXX.

CRESTED TITMOUSE.

PARUS CRISTATUS.

THE CRESTED TITMOUSE, which is distinguished from all the other species of the *Parus* tribe by the fine erect plumage that ornaments its head, is a scarce and local bird in this country, and confined chiefly to the northern parts of Scotland, where it inhabits the most wooded districts. In the vast forests of pine and fir, that cover so many parts of the north of Europe, this bird is of frequent occurrence: and it appears probable that it entirely confines itself to such localities, as, in our own country, it inhabits fir-covered tracts only. It is a hardy bird, and resides, throughout the year, in several of the northern countries of Europe, as far north as Sweden, where it is a permanent resident. It is an inhabitant of many wooded tracts in Russia, Poland, and parts of Germany, and is found in Switzerland among the mountain forests, and in some of the hilly and wooded parts of France.

In their habits these birds appear less influenced by the successive changes of the seasons than others of their tribe, and are, consequently, more stationary; and their migratory flights, when they do take place, more limited. That partial migrations occur is apparent, by the fact of their being occasionally seen in spring and autumn, beyond their usual forest limits, in plantations and shrubberies. Under such

circumstances, they appear to be hurrying on, as if on their passage to a distant part, passing hastily from bush to bush. In the summer they are found only in forests of large extent, whither they constantly resort to breed. Their haunts are chiefly the very tops of the tallest and oldest fir-trees; besides which they are occasionally seen in juniper trees or bushes, to which they are very partial.

In habits the Crested Titmice resemble others of their tribe, being always in motion from branch to branch, and are lively and quarrelsome, although preferring society. They are seldom seen alone, but associate in flocks, and frequently with other small birds of their kind. When seen among their native forests these birds do not appear shy; but when passing along in their migratory courses they are hurrying and restless.

The Crested Titmouse has not hitherto been ascertained to inhabit any part of England, although it is not uncommon in several of the forests and fir-covered districts of Scotland, from whence specimens are frequently obtained: in that country it has been seen as far south as the neighbourhood of Glasgow, where it is known to breed.

The call-note of this species is the same as that of the other Titmice; to which is usually added the sound *ghirrrr!* or *ghirrrr-kee!* This call is loudest in the pairing season. When any of these birds are caught, and it is designed to keep them in confinement, they ought to be placed several together in a cage, as they are fond of company.

The food of this bird consists in summer of insects, and their eggs and larvæ, in preference to seeds; but in autumn, winter, and spring, they consume also the seeds of pine trees, and other trees of the fir tribe, which they pick from the cones or take from the ground, where they obtain also many an insect cot that lies concealed among the moss. When caged, mountain ash and juniper berries, as well as hempseed,

may be given to them, and they require much water to drink and to bathe in.

As before mentioned, these birds breed only in large pine forests. The nest is to be found in the hollow part of a decayed tree, or in the deserted nest of a squirrel or magpie : it consists of moss and lichens, and is lined with hair or the wool of animals. The eggs are from eight to ten in number, and in form and colour as represented in the plate, (fig. 80.) They are said to have two broods in the year.

The remarkable crest upon the head, from which this species derives its trivial name, consists of rather narrow, long, and pointed black feathers, edged with white. These feathers are shortest upon the forehead, and lengthen as they approach the crown of the head : the longest are bent forward in the shafts, in consequence of which they can never lie quite flat. The longest, or hindmost of them, measure about an inch in length : the forehead is covered with black and white scale-like feathers. From the beak extends over the eyes a dull or dirty white band towards the nape, which is also of a similar colour. Behind the eye commences a black band, which runs towards the back of the head, and then inclining forward in the shape of a crescent, surrounds the cheeks and ear-coverts. The cheeks and sides of the neck beneath the black crescent are dull white, tinged with yellow. The throat and chest are black, from whence extends a narrow line of the same colour to the nape of the neck, forming a perfect collar. All the upper parts are mouse-colour, palest on the rump : the upper part of the breast is white, tinged with rust-yellow on the sides, which colour deepens on the lower part of the breast, and becomes on the vent, belly, sides, and under tail-coverts, brownish-yellow. The wing-feathers are dark greyish-brown, edged with mouse-colour ; the larger quills are edged with pale grey : the tail-feathers are dark brown, edged also with reddish-mouse-

colour, and the outer feathers have narrow white edges. The under surface of the wing and tail-feathers are dark grey, and the inner webs of the wing-feathers are edged with silvery-white; the under wing-coverts are dirty-white, tinged with rust-yellow. The iris is dark brown; the beak black; the legs pale lead-colour; the claws greyish-horn.

The crest of the female is shorter than that of the male; the black on the chin is not so far extended, and the black border round the neck is much narrower and frequently imperfect.

The young birds, before the first autumnal moult, have the crest small, the black round the cheeks imperfect, and the collar hardly visible. The chin is nearly black, the throat grey; the breast is dirty-white, and all the under parts are intermixed with grey.

The entire length of the Crested Titmouse is four inches and three-quarters. The wing measures, from the carpus to the tip, two inches and a half; and the tail extends about an inch beyond the folded wings; the tarsus measures three-quarters of an inch; and the beak about three and a half lines, from the forehead to the tip. From the forehead to the end of the longest feather of the crest is about an inch and quarter, and the fourth quill-feather is the longest in the wing.

In the autumn of 1839, during a rough gale of wind from the north-west, we observed in a fir-wood near Claremont House in Surrey, a small bird apparently of this species, but being unable to obtain the specimen, we could not ascertain the fact. It is possible that a Crested Titmouse might have been driven so much further south than its usual supposed limit by a strong wind.

The egg of this species is figured 80 in the plate.



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PARIDÆ,

PLATE LXXXI.

LONG-TAILED TITMOUSE.

PARUS CAUDATUS.

THE LONG-TAILED TITMOUSE is known all over Europe, and in the northern and temperate parts of Asia, in situations of a sylvan character. From the central parts of Europe many of this species depart for milder climes in the autumn, for the purpose of passing the winter, but with us they remain the whole year. During the spring they are seen in pairs, but in autumn and winter these interesting little birds are seen following their vocation in families; the little party consisting usually of about a dozen. Constantly in motion from tree to tree, and flying in a straight line with much rapidity, they remind the spectator of the pictured representation of a flight of arrows. Their movements are noiseless, on account of the soft and silky nature of their plumage; but their presence may always be detected by the musical family cry, *zit!* *zit!* which is continually reiterated among the little party. From the small size of the body, and its exceeding lightness, and from the length of the tail, these little creatures in windy weather appear hardly able to preserve their balance when on the wing.

Much affection seems to subsist among the members of each little family, and they always roost together. Perched side by side upon a horizontal branch, among thick foliage, their feathers puffed up, their heads behind their wings, and

their long narrow tails drooping, the little party has a singular appearance. During winter they crowd together in a hole in a bank or tree for warmth.

In their everlasting motion while awake, these birds show the family they belong to, but they are not quarrelsome nor cruel, like some of their predecessors. Towards mankind they show little fear, but on the approach of a bird of prey they fly into the thickest part of the nearest bushes with such cries of alarm, that other birds present have notice of the enemy's approach. As before mentioned, these birds prefer wooded districts, and are fond of the vicinity of water.

The notes of the Long-tailed Titmouse, besides the usual call, are *tea! tea!* and *tsee-ree-ree!* Their food consists chiefly of insects, and their eggs and larvæ.

The nest of this species is one of the most beautiful among the structures of birds, and deserves the greatest admiration for its lightness and delicacy. So many and various are the situations chosen by the little architects, that it is difficult to say where these beautiful nests are most commonly to be met with. They are found in thorn-hedges and bushes, fruit-trees, willow shrubs, furze bushes, &c. The nest is of a long oval form, with the entrance on one side towards the top: the materials chosen are green moss, matted together with spider-cots, vegetable wool, and fragments of the bark of birch-trees. The outside materials, consisting chiefly of tree-moss, are usually taken from the bush or tree in which the nest is placed, which assimilates it with the stems, and sometimes serves to preserve it from detection until the little ones are flown. The entrance of the nest is scarcely large enough to admit a person's finger, and is nearly closed by the elasticity of the constructing materials. When complete, such a fabric cannot be looked upon without the utmost admiration and wonder, when we observe the minute fragments of which the nest is chiefly

composed, its elasticity, and the great tenacity with which these small parts are held together. The last-mentioned quality appears due to the webs of spiders, and to the silky cots of chrysalides, of which great part is composed.

These substances must also be a great protection to the interior of the nest against rain, which apparently cannot penetrate through them; and such a defence must be the more necessary to this species, as many of their nests are built early in the spring, while the trees and hedges are still leafless, and are often placed in situations exposed to the weather.

The Long-tailed Titmouse begins to construct its nest early in March, and it is said to be usually three weeks in progress. We once found one complete as early as the 22nd of that month, and being desirous to observe the habits of the little occupants, visited it several times; but, being placed in a leafless hedge, we anticipated the fate that soon befel it,—it was pulled out by some merciless boys, and the fragments scattered about the lane. On our next visit we found the two little birds flying distractedly about, and hurrying to and fro near the fatal spot. This was continued for several days, and at last they were observed in another part of the same lane, about a hundred yards distant, employed in constructing a second nest from the scattered materials of the former. After about a fortnight, the second nest was also ruthlessly destroyed, and the poor little birds abandoned the spot. The nests of this species are usually found at the elevation of from two to five feet from the ground; but we remember to have seen one in a tall tree, at about the height of five-and-twenty feet, probably in the process of building, as the birds were going frequently in and out.

In the Long-tailed Titmouse the beak is very short, measuring less than a quarter of an inch, and, in consequence of the bristling feathers which grow about its base, a very small part of

it is visible. The upper mandible projects a little beyond the lower, and is more arched than in others of the Titmouse family. The eyelid in this species is bare of feathers, and the upper lid is always thicker than the lower, particularly during the time of incubation.

The plumage of the adult male is as follows. The eyelid is lemon-yellow: the beak is black, and polished like ivory. The bristling feathers which surround, and partly cover the beak, are white with brownish tips. The top of the crown and nape, the throat, chest, and all the under parts are white, but dull, as if dusty, intermixed on the flanks, thighs, and vent with tile-red: the under tail-coverts are dingy, dull tile-red. Beneath the white crown, or crest, there extends along the side of the head a broad black band, which surrounds the eyes and passes backwards to the nape, where it unites with the black feathering of the middle of the back: the lower part of the back is black, intermixed with streaks of pale tile-red; and the short upper tail-coverts are black. The rest of the back and shoulders are white, intermixed with dull tile-red. The wing-coverts are brownish-black, those nearest to the body broadly tipped with white; the tertials are dusky, bordered with white. The secondary quills are almost black, with white edges, and the primary quill-feathers are dusky. The six middle feathers of the tail are black; the three outer ones on each side have the outer web white, and a white, wedge-shaped spot on the inner web, towards the tip. The feathers of the tail are graduated in length, the outer pair being little more than an inch in length, while the six central ones measure three. The under coverts of the wings are white, the under surface of the quills grey, with silvery edges. The legs and feet are black; the soles of the feet frequently grey: the iris is dark brown.

The female nearly resembles the male in plumage. The young, before the first moult, differ in some respects from the

adult birds ; their eyelids are bright blood-red, the black about their head and upper parts is of a smoke colour, and all the other colours paler.

The entire length of the Long-tailed Titmouse is five inches and a half. The wing, from the carpus to the tip, is two and a half inches, and the tail, which is fully three inches long, extends two inches and a quarter beyond the closed wings ; the tarsi measure nine lines. The feathering of this bird is so silky and loose that the head and body are mingled into one shapeless ball.

In this species the number of eggs varies from nine to twelve, and there are sometimes found as many as fifteen in one nest. They are in size and appearance as represented in figure 81, in the plate, being dull chalky-white, minutely speckled about the zone with rust-colour ; some are found entirely plain.

This little species is distinguished in different counties by various local names, in allusion to its peculiar manner of constructing its nest. In Surrey it is called the " Long-pod," in Suffolk the " Pudding-poke," and, in some counties, the " Bottle-tit," all sufficiently descriptive of its habits.

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INSESSORES.
DENTIROSTRES.

PARIDÆ.

PLATE LXXXII.

BEARDED TITMOUSE.

PARUS BIARMICUS. (*Linn.*)

Among the smaller British birds there is none more lovely than the Bearded Titmouse. Its elegant form, silky plumage, and well-defined markings, combine to render it, when in a living state, one of the most pleasing of the feathered race. The intensely black moustaches of the male bird add greatly to its beauty, although they appear an extraordinary appendage to a bird so gentle and mild in character, inducing the belief that moustaches are by no means certain indications of ferocity or courage. The nature of the Bearded Titmouse is amiable, and it is pleasing and elegant in all its movements. These birds are restless, like their congeners, the rest of the Titmouse family, continually running up and down the stems of the rushes, and rocking themselves frequently at the extreme points, influenced by the wind or by their own slight weight. They associate in pairs or families, and occasionally unite in small flocks. They display great agility in climbing the rushes, among which they live, but are seldom seen upon the ground. Their flight is buoyant, and their note, which is often uttered on the wing, is clear and ringing.

The Bearded Titmouse is, in this country, a bird of very local distribution, on account of its exclusive attachment to

situations of a peculiar character. It is found only in wet and marshy localities, abounding in reeds, and affording a plentiful supply of its peculiar food, namely, small mollusca. These localities are chiefly the banks of fresh-water rivers ; but they also abound in some situations where salt water flows in at every tide, namely, at Erith on the Thames, &c. ; and Montagu mentions having killed a specimen near Winchelsea in Sussex, among the reeds that grow close to the sea-shore. By this naturalist the earliest correct accounts of its habits in this country were given ; to which we shall again refer. The localities, mentioned by many different authors, are reedy tracts near Cowbit in Lancashire, and similar situations in Gloucestershire ; several of the fresh-water broads in Norfolk ; large tracts of reeds along the Suffolk coast ; the skirts of Whittlesea near Huntingdonshire, and the fenny districts of Lincolnshire ; it is also found near Godalming in Surrey, and is said to inhabit the banks of the Thames from London as far as Oxford. In this latter quarter, as well as elsewhere, this species appears very locally distributed, as we know parts of the Thames, many miles in length, where it does not occur.

The Bearded Titmouse apparently inhabits the same situations summer and winter ; and, notwithstanding its delicate appearance, seems to brave the cold of the chilly and dreary spots it frequents with impunity ; concealing itself, however, as well as circumstances will permit. In the Magazine of Natural History some particulars are recorded, which, as they embrace many points of the habits of these little birds, we copy without farther apology. " I was told," says a correspondent of that work, " that some of these birds had been seen in a large piece of reeds below Barking Creek ; and being desirous of observing them in their haunts, I went, accompanied by a person and a dog, to the above named place, on a cold and windy morning ; the reed-cutters hav-

ing commenced their operations, I was fearful of deferring my visit, lest my game might be driven away. Arrived on our ground, we traversed it some time without success, and were about to leave it, when our attention was roused by the alarm cry of the bird. Looking up, we saw eight or ten of these beautiful creatures on the wing, just topping the reeds over our heads, uttering, in full chorus, their forcibly musical note, which resembles the monosyllable *ping* ! pronounced at first slow and single, then two or three times in a more hurried manner, uttered in a clear and ringing, though soft tone, which well corresponds with the beauty and delicacy of the bird. Their flights were short and low, only sufficient to clear the reeds, on the seedy tops of which they alight to feed, hanging, like most of their tribe, with the head and back downwards. After some time, we were fortunate enough to shoot one, a male, in fine plumage. I held it in my hand when scarcely dead. Nothing could exceed the beauty of the eye ; the bright orange of the iris, surrounded by the deep glossy black of the moustaches and streak above, receives additional brilliancy from the contrast, and struck me as a masterpiece of colour and neatness."

The principal food of the Bearded Titmouse consists, as we are informed by another correspondent of the Magazine of Natural History, of small shell snails, the *Succinea amphibia*, &c., with which their crops have been found filled. These appear to pass into the stomach in a perfect state, where they undergo the process of decomposition, which is accomplished by the muscular action of the stomach, aided by the trituration of numerous angular portions of quartz, by which the minute division of the shells is effected. In addition to this, we are informed by Mr. Yarrell, that "the sides of the stomach are muscular, and much thickened, forming a gizzard, which the true Titmice do not possess." They are supposed also to feed upon many other insects that abound in the aquatic

localities frequented by this species, as we of the reed and other water-plants.

The nest of the Bearded Titmouse r those of the reed and sedge warbler, and often accords with that of the latter b which probably causes it to be freq unless when distinguished by the eggs. found in the thickest part of the reeds, a authors to be suspended between their st of several feet from the ground; while more probability, describe them as sustai the surface of the ground by means of the broken reeds, among which they are fas nest is cup-shaped and rather deep, compo and withered leaves of reeds, thickly an the flowering tops of the latter, intermixe The eggs are also variously described. the ground colour being white, but in th the markings, their several descriptions

Yarrell speaks of them as "sparingly m lines and scratches." Mr. Hoy says, the over with small purplish-red spots, few small faint lines and markings of While Temminck says, they are reddish which are most numerous on the larger selves add another variety to the list, ha years since, for the use of our quarto wor an ornithological friend in Suffolk, whi marked sparingly with fine black hair-li sented in the accompanying plate.

The task of nidification commences young birds are on the wing in the foll which was procured by Montagu, in Ju feathers much the colour of those of the f looser texture, as in all young birds.

The geographical distribution of this bird appears far less extended than that of others of the *Parida*. It appears confined to the temperate parts of Europe; and Holland, where, from the nature of the country, it is abundant, is, possibly, its northern limit. Southward of that country it is found in some parts of France and Italy. In England it has not been observed further north than Lancashire, nor does it appear to be generally known further towards the west than Gloucestershire.

In several points of structure and habits this species differs from the other members of the *Parus* family; namely, in the muscular character of the stomach before mentioned, in its food, and in its aquatic habits. These differences have caused it to be removed, by some systematic authors, from among the *Parus* family, and distinguished by the generic title of *Calamophilus*.

The entire length of this species rather exceeds six inches. The wing, from the carpus to the tip, measures two inches four lines; the second, third, fourth, and fifth feathers are nearly equal in length. The tail extends about two inches and a quarter beyond the tips of the folded wings; its feathers are graduated; the central pair measure above three inches, the succeeding pairs shorten by about three lines each, and the outer pair is, therefore, an inch and a half shorter than the central one; these feathers are all rather broad and pointed, and very delicate in texture. The beak measures about four lines, the tarsi three quarters of an inch.

The plumage of the adult male is as follows: the forehead, top of the head, and sides of the neck, are delicate ash-colour; the chin, throat, and upper part of the breast, pure white: a moustache of intense black occupies the space between the bill and the eye, and descends down each side of the face. The back and scapulars are fawn-colour; the upper tail-coverts, flanks, and thighs the same: the four

longest feathers of the tail are also fawn-colour; the rest rufous-brown, shading into white towards the tips. The quill-feathers are dusky, edged with white; the tertials black, deeply bordered with rust; the coverts of the wing the same. The lower part of the breast is tinged with peach blossom, the middle of the belly white, the vent black: the beak and eyes are orange, the legs and feet black. In the female the moustache is white, the head and sides of the neck hair-brown; the rest of the upper plumage brownish-fawn; the head and middle of the back streaked with dusky along the shafts of the feathers. The tail is not so long as in the male, but the rest of the colouring is nearly similar.

The egg of the Bearded Titmouse is figured 82 in the plate.



*INSESSORES.
DENTIROSTRES.*

SYLVIADÆ.

PLATE LXXXIII.

ALPINE ACCENTOR.

ACCENTOR ALPINUS. (*Bechstein.*)

THE ALPINE ACCENTOR, as its name implies, inhabits chiefly mountainous countries, especially the Alps of Switzerland. It is found in some of the most elevated parts of France and Italy; and it is to be presumed that it also may be an inhabitant of many of the mountainous regions of Asia, as it is known to be a resident in some of the hilly chains of Japan. Upon the Alps these birds are observed at all seasons of the year, and chiefly choose the region where the snow begins to give place to vegetation. In summer they ascend the loftiest of the Swiss mountains, and are constantly seen on the St. Bernard, in the vicinity of the Hospital, at an elevation of about six thousand feet above the level of the sea. In winter they descend into the valleys, and in severe weather occasionally frequent farmyards and villages. In manners, the Alpine Accentor is a staid and quiet bird, and appears not very observant, as it betrays but little consciousness of the presence of man. In their native regions these birds may be observed associating in small parties; when approached, they only fly to a little distance, and settle again, or hop away among the stones upon the ground, in the same manner as the hedge Accentor conceals itself in our gardens. They are seldom seen to perch or rest upon trees, but are usually observed to alight upon rocks, or among piles of stones.

The call-note of these birds is said to be of the word *tree! tree!* but the song is considered very pleasing, and resembles that of a pipit.

The food of the Alpine Accentor consists of berries, and small snails, which they take among the stones; also beetles, ear-wigs, &c. All sorts of grass-seeds also constitute a great part of the year.

The nests of these birds are usually made in or among stones, or under low bushes of Alpine plants to the ground, and covered over by the stones, or by shelving stones, which protect them from the most unfavourable weather. The nest consists of fine grasses, and is lined with wool and feathers, and shaped, and resembles in form and structure the nest of the common species, the hedge chanter; there is a great resemblance to that nearly allied species, the blue-green, without any spots; they are probably even more numerous. These birds have two broods in the year; the first is hatched in May, the second in July.

As the habits of the Alpine Accentor are, in a great measure, to mountainous regions, and as it is only locally and partially distributed, and as it is on the western borders of Europe, it is not a surprise how it should happen that it has not hitherto been introduced so far from their range. It has only been occasionally penetrated so far from their range, and has only visited our island; especially as these birds are not movements do not appear to seek change of climate, only to consult the variations of temperature. It is from a greater or less elevation above the sea level. Three instances only are recorded of the Alpine Accentor in England; one of these was shot

the neighbourhood of Epping Forest, another at Cambridge, and a third in the garden of the Deanery of Wells.

Although the Alpine Accentor is considered a rare and accidental visitor with us, yet some may possibly pass unnoticed: should a specimen come under the observation of an inexperienced observer, it may be detected by these general characteristics:—In form, this bird is short and rather stout; its wings are large, and the breadth of the tail, which is very conspicuous, would alone enable an ornithologist to detect it. All the feathers of the tail have a white, or buff-coloured spot upon their tips: in adult birds the throat is white, with black crescent-shaped spots: young birds have the throat ash-colour, without spots. Its habits, as before mentioned, are terrestrial, and when on the ground it frequently moves its tail and wings in the manner of the redbreast. This species is the largest of its family.

The distinguishing characters of the genus *Accentor* of Bechstein, are:—bill strong, straight and sharp pointed, the upper mandible emarginated; nostrils naked and basal, pierced in a large membrane: first quill-feather of the wing very short, the second and third nearly equal.

The measurements of this bird are as follows. Its length is from six and a half to seven inches from the tip of the beak to the extremity of the tail. The tail is slightly forked, and the upper tail-coverts, which are very long, reach to within an inch of its extremity. The beak is seven lines in length, and much compressed towards the tip, which is black, while at the base both mandibles are yellow: the gape and tongue are also yellow; the iris is yellowish brown in adult birds, and cinereous brown in young specimens. The claws are of moderate length, and rather stout and large, particularly the hinder, which are much arched, compressed towards the tip and very sharp. The front of the tarsus is scaled; the legs are dingy reddish yellow, the soles and joints of the feet and

are brownish; the young birds have the claws of nearly the same hue. The tail is an inch in length, the middle toe and the hinder about seven lines, of which one

The plumage of the Alpine Accentor is soft, and its varied colours are as rich as the head, nape, and sides of the forehead, brownish ash-colour, the latter brown; the back and shoulders brown in their centre, and along their broadly edged with cinereous ash, which rust-colour on the scapulars. In some is reddish ash-colour with dark shaft streaks. The throat and chest are very ground-colour being white, bordered band, and speckled over with crescent-shaped. The remainder of the chest and breast are so the sides of the breast and flanks fine whitish edges to the feathers. The rest are white, tinged with yellowish brown, as brown: the under tail-coverts are dark with white: the lesser wing-coverts are lower row bordering upon the greater at the end, with pure white tips; the large with yellowish ash-coloured edges, and spots on the tips;—by these feathers formed across the wings. The tertials with rust, and have faded edges: the secondaries are duller in colour, with narrower edges dark brown, edged with rust yellow: dusky ash, palest towards the root, all than at the tip; the feathers individualish grey, and with a rust-coloured spot under part of the tail is dark ash-colour. This is their appearance in autumn.

In the spring plumage there is some difference in the colours, owing to the wearing away of the edges of the feathers. The spots on the tip of the tail-feathers are white instead of rufous; the feathers of the under parts have lost their white edges, and therefore appear redder; the crescent-shaped spots on the throat and breast are no longer perfect: the upper parts are of a cleaner ash-colour; the oblong dark spots on the back are become more visible; the white bars on the wings are much narrower, and partly lost.

The female differs little from the male, but she is rather smaller in size, and her plumage is less bright, less rufous, more spotted on the under parts, and more grey on the flanks: the spots on the breast are smaller and paler, and the under mandible less yellow.

In young birds the back is frequently much tinged with brown; the beak is horn-colour, with dingy yellow at the base: the white edges of the rust-coloured feathers on the sides of the breast are so broad, that they nearly cover the principal colouring.

The young birds before the first moult are very different from the parents, their whole upper parts being ash-colour, with dusky spots; the throat and breast have no spots, but are plain greyish white.

The egg of this bird measures eleven lines in length, and is rather pointed at the smaller end: in colour it is plain greenish blue, as represented in the plate, fig. 83.

PLATE LXXXIV.

HEDGE ACCENTOR.

ACCENTOR MODULARIS.

THE HEDGE ACCENTOR, commonly called the Hedge-Sparrow, is a very elegantly shaped bird, but on account of its simple plumage, is not generally noticed by the common observer; it is therefore necessary to speak a word in its favour, to point out its merits and beauty, in order that it may not be overlooked. The habits also of this bird tend to conceal it, although it is one of the most common and constant inhabitants of our gardens, and one of the few that enliven and cheer us with a winter song. Its character is mild and confiding, and in manners it is sociable, meek, and pleasing, but somewhat timid. In the tones of its voice we consider that this pretty chanter rivals, if it does not surpass its associate, the redbreast, its notes being more round and full, and uttered in a lower key; but it is not so well known as a singer, for while the robin places himself boldly on a conspicuous branch, and exhibits his orange breast and dilated throat, as if to challenge our admiration, the quiet Hedge Accentor, hidden among the foliage, sings his sweet but short lay unobserved and unknown.

The Hedge Accentor is to be met with in Britain at all seasons of the year, and in most localities not entirely destitute of trees and hedges. During the summer months this species visits Norway and Sweden; and is found generally





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throughout the temperate parts of Europe, retiring to the southern parts in winter. These birds are seldom seen but in pairs; their chief haunts are low bushes, hedges, and underwood, orchards, plantations, kitchen gardens, &c. They keep themselves generally near the ground, and remain in the vicinity of their birthplace.

The song of this species continues the whole year, with very little interval; in the breeding-season it is amplified by some additions, and in the depth of winter it is not discontinued; but on a sunny day, from the covert of a low bush, its cheerful and pretty song may frequently be heard.

In November, as soon as the leaves are fallen, Hedge Sparrows begin to be seen upon the ground in numbers, hopping about the borders in flower-gardens, in busy and unremitting search for their minute food, twitching about, and turning over the scattered leaves. So quiet are they in the search, and so close do they keep themselves to the ground, to whose tints their plumage bears much resemblance, that the eye is often at fault to detect them.

When caged, the Hedge Accentor still shows a decided partiality towards terrestrial habits, very commonly roosting upon the floor of its cage. When it sleeps its legs are much bent, and its body held in a horizontal position; when awake also, its attitude is singularly different from that of most other small birds, and its manners remarkably quiet and retiring. The male and female, when caged together, show great attachment, constantly sitting and roosting side by side, and in winter pressing closely to one another. They also become much attached to companions, even of a different species. We possessed one, a fine male bird, and an excellent singer, which was so much attached to its only companion, a male redbreast, that on the latter escaping by accident from the cage, the Hedge Sparrow became dull, neglected its food, and sat with ruffled feathers, and appeared

as drooping and sad, that we thought it necessary to give the poor solitary its liberty, in order to save its life. To their human friends these birds also appear grateful and attached; we kept a pair one winter in a garden-cage, and not desiring to prolong their imprisonment, we let them out early in the spring, as soon as we thought they would be able comfortably to obtain their subsistence. They were no sooner free than, instead of forsaking us, they commenced building themselves a nest in a leafless hedge, about two yards from their former prison.

The food of this species consists of insects and seeds: in the spring of the year and summer, they feed principally on the former, such as small beetles, caterpillars, flies, and the larvæ of many insects; but in autumn and winter they subsist much on seeds, which they pick up from the ground, but never gather from the trees or plants on which they are produced, which circumstance speaks greatly in favour of the harmlessness of this little creature, as well as of its utility in clearing the ground from thousands of superfluous seeds. The young birds are invariably fed with insects.

In confinement the Hedge Accentor feeds on rape and hemp-seed, crumbs of bread, chopped meat, and almost everything eatable. These birds are easily tamed, and will live some years, seemingly contented and happy.

The Hedge Sparrow is a very early breeder; we have reason to believe it to be the earliest of any of our native birds. Among our memoranda we have a notice of having seen a nest of this species on the 21st of January; and as late as the 22nd of July we have found one with fresh-laid eggs in it. The nest of this species is usually placed in a thick thorn hedge, or bramble, at an elevation of from one to four feet from the ground. It is usually composed of green ground-moss, intermixed with roots and dry stalks, to which the moss is attached, and lined with tufts of cow's hair,

or knots of wool, and occasionally a few long horse-hairs ; the nest, when complete, has an unfinished appearance, especially on the outside, which is very ragged ; within, however, it is thickly and warmly lined, the cow's hair forming an excellent mattress. We have generally observed that the materials employed in a Hedge Sparrow's nest are of a dark colour, especially the inner lining ; can this be in order to harmonize the better with the black and dingy colouring of the young nestlings when first hatched ? It is remarkable that the cuckoo, which lays a pale, mottled, greyish-brown egg, should so often deposit it in the nest of this species, whose eggs are of so different a character : instinct may teach the parent cuckoo that her young, when hatched, exhibits a red gaping mouth, similar to those of the young Hedge Sparrows, therefore her choice may be a necessary precaution in the deceit practised upon the duped foster parents. The nest of this species is in form deep and well rounded, and the eggs, from five to seven in number, are in shape and colour as represented in our Plate.

In form the Hedge Accentor is slender and delicate, the tail long and narrow, and the beak thin and compressed towards the tip. The colours of the adult male bird are as follows : the head, neck, and breast are pale slate-colour ; the cheeks are tinged with dusky, and the feathers have white shaft streaks ; the top of the head, and nape of the neck are tinged with brown. The upper part of the back and the shoulder feathers are light reddish-brown, with dusky spots in the centre of each feather, giving a tessellated appearance ; the rump and upper coverts yellowish-brown. The throat is of a paler grey than the head, and the middle of the belly dingy white ; the flanks are yellowish-grey, with long brown streaks, darkest about the thighs ; the under tail-coverts are yellowish-white, with a dusky lancet-shaped streak. The wings resemble in colour the back, the feathers being

dusky, edged with reddish-brown; the are tipped with white, which forms a b The tail-feathers are dark greyish-brow the under wing and tail-feathers are brov coverts slate-colour.

The male and female differ very little latter is always rather less in size, the paler, and the back tinged with grey. I sexes the iris is brownish-red; the bea of the mouth dirty yellow; the gape and tarsi thin and delicate, the claws shar lour; the legs and feet are reddish-brow place in July or August.

The young, before their autumnal mo from the adult birds; over the eye is streak; the top of the head is deep yel of the neck dingy brownish-yellow, spo entire back and shoulders yellowish-bro spots; the rump yellowish-grey; the lowish-white; the cheeks dull rust-yello the upper part of the breast and flanks with black oval spots; the middle of t dirty white; each feather greyish-yellow The under tail-coverts are rust yellow, streaks; the wings and tail are as in tl the tips of the greater coverts are rus white, and the lesser coverts are also tip The iris is at first dusky, and afterward beak is ash-brown on the upper mandil the throat and tongue orange, the co red.

The length of the Hedge Accentor i and three-quarters. The beak measures tapers from the base to the tip; the win



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83 .



84 .





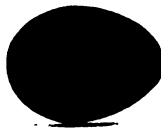
85.



86.



87.



89.

1. The first part of the document is a list of names and dates, which appears to be a record of some kind. The names are written in a cursive script, and the dates are in a more formal, printed style. The list is organized into two columns, with names on the left and dates on the right. The names are: John Smith, James Brown, and William Jones. The dates are: 1812, 1813, and 1814. The list is followed by a signature, which is also in cursive script. The signature is: John Smith.

carpus to the tip two inches nine lines, and the third, fourth, and fifth quill-feathers are nearly equal in length. The hind claw in this species, as well as in the preceding, is large and arched.

The egg of the Hedge Accentor is figured 84 in the Plate.

INSESSORES.
DENTIROSTRES.

PLATE LXXXV

PIED WAGTAIL.

MOTACILLA LOTOR. (*Re*

OF this elegant and pleasing group, four are found until lately, considered as British; three are common and well known, and the fourth so rare as to be looked upon as a straggler, or visitor. Recently a fifth species has been added, which we shall speak hereafter.

The species, at present under consideration, is common and generally diffused of all, and is found in localities of an open character, where open heath prevails, or where wide heaths and open moorland prevail, especially in the vicinity of water; they prefer open spots where the shortness of the herbage affords them with facility. The pleasure these birds derive from the herbage may be observed whenever a large flock of them immediately these pretty creatures are seen on the hedge, or boundary, and alighting on the open face, where they run along, with steps and leaps which cannot follow their quick succession; peculiarly lively gaiety, and constantly moving their tails; if disturbed, they spring up with a loud cry, and bounding along to a little distance, they resume their gliding motion, presently alight again. They are often seen on the pebbly banks of rivers, along with





food ; and they may frequently be seen in summer bathing and washing themselves upon a shallow shore.

This bird, although constantly resident in Britain, and not generally considered of a migratory disposition, evidently changes its station at different times, and after a periodical absence returns again. It may be observed in gardens, and grass fields, in summer and in the early part of autumn, in considerable numbers, probably several families together ; while, in the same places, in winter, few or none are to be seen, notwithstanding the usual enticement of fresh-mown lawns.

This species, as far as the subject has at present been investigated, appears restricted to a limited range, including chiefly Norway, Sweden, and the British Isles ; and it is occasionally seen in the north of France. In the two first mentioned countries it is, doubtless, only a summer visitor ; as it does not even brave the cold of the northern counties of England, in the winter season, but retreats from those parts in autumn towards the south.

We have ourselves long suspected that the migrations of the Pied Wagtail were more decided and extensive than the commonly received opinion warrants ; and our suspicions have been most agreeably confirmed, by an account that appeared in the fifth No. of "The Zoologist" for May last.

We hope we may consider ourselves at liberty to transcribe a considerable part of the communication, which, we believe has not yet been noticed in any work, professedly upon British Birds. It is from the pen of A. E. Knox, Esq.

"The Pied Wagtail arrives from the Continent, on the shores of Sussex, about the middle of March. Although several remain with us during the winter, these bear but a small proportion to the number that visit us in the spring. On fine days during this month, with a gentle breeze from the south, I have frequently seen them, on different parts of the

coast, flying directly from the south, and first at sea as, at first, to be scarcely perceived, however, becoming more distinct, until they come on the open shore, sometimes singly, and sometimes in small parties.

“The fields, in the neighbourhood of the coast, a short time before scarcely an individual is seen, are soon tenanted by numbers of this species. Every day they continue dropping on the shores. The old male birds arrive first, presenting a black and pure white plumage of the breed, the females, and the males of the preceding year, resemble the females, the plumage on the head and neck iron grey, do not make their appearance until afterwards. It may be observed that the plumage on the head and cheeks of these newly arrived birds is purer at this time than in those which have been here, and altogether they have a fresher, and, in general, a more pleasing appearance than they themselves present on their arrival in this country.

“Some of the old males appear to have departed from the Continent; for after their departure from the shore, they exhibit many signs of restlessness, performing short flights, and incessant calls to their mates.

“It is worthy of remark that those which remain with us during the winter, do not begin to change their garb at so early a period as their travelling companions. On the arrival of the latter, who invariably appear in the full breeding plumage, the first which have partially commenced the change, a few black spots begin to appear on the throat, and the light grey of the breast is varied with occasional feathers of a dark grey. About a fortnight afterwards this assumption of the

is complete ; and at the expiration of that time, the Pied Wagtails which have arrived from the Continent, and those which have remained in England during the winter, present the same appearance.

“ After remaining in the neighbourhood of the coast for a few days, these birds proceed inland in a northern direction ; and any practical observer of birds, in the interior of the country, may perceive how much more numerous they suddenly become at this period. There is scarcely a pool, road-side ditch, or village horse-pond, where they may not be seen in pairs ; and in districts where, but a week before, the species was but thinly distributed.

“ These birds pair early and moult soon, having completed the change at the end of July, or early in August. The black feathers gradually disappear from the throat in both sexes, and the dorsal plumage becomes of a lighter colour in each ; the back of the male assuming the grey of the female, during the breeding season ; while that of the female, and the young of the year in both sexes, changes to a very light grey. Indeed, between the two latter there is no external difference of appearance.

“ About the middle of August the Pied Wagtails commence their return towards the sea-coast, and now first appear to be gregarious in their habits. At this season I have noticed them in considerable numbers on village commons, and similar localities in the interior of the country, where they remain but a few days, and then proceed to the south.

“ At the latter end of the month, or the beginning of September, they may be seen near the sea, in flocks of from thirty to forty, flying invariably from west to east, parallel with the shore, and following each other in constant succession. These flights continue from daylight until about ten o'clock in the forenoon ; and it is a remarkable fact, that so steadily do they pursue this course, and so pertinacious are

they in adhering to it, that even a shot, fired at an advancing party, and the death of more than one individual, cannot induce the remainder to fly in a different direction ; for after opening to the right and left, their ranks again close, and the progress towards the east is resumed as before.

“ I have observed that their proximity to the shore, during this transit from west to east, seems to depend, in some degree, upon the character and extent of the country intervening between the downs and the sea. For instance, in the more western parts of the country, between Chichester and Worthing, where a flat, maritime district, of considerable extent and in a high state of cultivation, lies between the hills and the sea, the flocks appear to be less numerous, or rather more scattered, and occur at greater distances from the coast than in the neighbourhood of Brighton, where the downs approach close to the shore, and where the flocks appear to become more concentrated.

“ I am acquainted with a good practical observer, who informs me that, in the neighbourhood of Brighton, he has seen upwards of a thousand pass in a single morning. The same person has witnessed, as well as myself, the arrival of these birds from the Continent, in March, on the open coast near Hove, between Brighton and Shoreham.

It is certain that these birds never retrace their course in a westerly direction ; and that, from this period, throughout the entire country the species continues to be comparatively but sparingly distributed, until augmented by fresh arrivals from the Continent, in the warm days of the ensuing spring.”

The fact of the migration of this species appears to have been recognised formerly, (since Bewick mentions that it is believed to migrate towards southern climates in October) and to have been since lost sight of. Even Montagu, although he states that in winter, in severe weather, they congregate in marshes, subject to the flow of the tide, where they may be

seen on the southern coast, when none are to be observed inland, does not seem to have had any suspicion that they went still farther.

Notwithstanding the migration in autumn of this species in numbers, as above described, many yet remain behind. At the present season, the middle of December, we have observed flocks of eight or ten fly towards the south-west, just before dark in the evening, not one flock alone, but so many that the aggregate must amount to several hundred individuals. These all fly at an elevation just above gun shot; and although being desirous of obtaining specimens, we walked some miles along the bank of the Thames for that purpose, not one specimen was to be met with, either on the ground or within the range of a gun. Whether these are now on their way to join their migrating brethren, and have stayed to this late period, in consequence of the unusual mildness of the season, or intend to pass the winter in these latitudes, future observation must decide.

Towards the end of February, Pied Wagtails may be seen flying in pairs, having by that time chosen their mates for the summer. Some differences of opinion seem to prevail with regard to the plumage of the two sexes of this species at different seasons, some authors describing the female to have her back dark slate-grey, or grey mottled with black, and attributing to the *Motacilla alba* of Linneus alone, the pure grey-back. Our opinion on the subject rather differs from this, and an observation recorded some time ago in our own notebook, will, we believe, be found frequently correct. "Feb. 25, saw two Pied Wagtails flying together in pursuit from tree to tree, evidently a pair: one had the head and back perfectly black, of an uniform colour; the head and nape only of the other were black, the back clear, pale ash-grey. These birds, it may fairly be presumed, were about the same age: why then does the back of the one become darker, and that of the other lighter in the spring season?"

The Pied Wagtail produces its first brood early, and consequently a second or late brood is frequently found.

The courting scenes in which the male endeavours to advance his suit with his chosen mate, are exceedingly amusing. The male stands before the object of his affection with actions expressive of the deepest humility and reverence, alternately raising his head, and then bowing until his little beak touches the ground; from time to time, spreading his tail like a fan, and drooping his wings; these actions we have seen continued uninterruptedly for the space of a quarter of an hour. Meanwhile, the object of these tender attentions stands at the distance of about half a yard, apparently listening with maiden coyness and looks half averted, an attentive and admiring spectator.

The nest of this species is sometimes placed upon the ground beside a tuft of grass, or beneath the shelter of low herbage, sometimes in a hole in a pollard tree, or a crevice in an old wall. It is in all cases well bedded in the surface in which it is placed. We have found it in the middle of a turnip field, hidden among the spreading leaves. Advantage is taken in most cases of a convenient depression in the surface of the ground, in which the nest is constructed as in a cup, the inner part only being visible, and the upper edge of the nest on a level with the earth. We have also taken the nest and eggs of this species from the crown of a pollard willow by the side of the Thames, at an elevation of about eight feet from the ground. The nest was placed in a cavernous recess among the stumps. It was chiefly composed of dry skeleton leaves intermixed with the more usual materials.

The parent bird is extremely solicitous for her young or eggs, and will suffer herself almost to be taken off the nest before she makes any effort to leave them. When compelled to leave her nest, she retreats to but little distance,

and alighting upon a railing or clod of earth, watches it with jealous attention ; and presently, when the danger is past, with one or two efforts of her springing flight she is returned again.

The nest of this species is a very thick, close, and elastic structure, composed of a great quantity of fibrous roots and stalks of grasses, intermixed with tufts of vegetable down, and the hair or fur of animals, and sometimes a few large feathers : these feathers are not used as a lining, but on close investigation may be seen in the interior of the vegetable wall. The inside is thickly lined with thistle down ; and lastly with hair, chiefly that of the cow. When complete, the nest is capacious and rather shallow ; the eggs are five or six in number, and of a long oval form : the ground-colour is delicate bluish-white, tinged occasionally with a yellowish or greenish hue, and sprinkled over with pale grey and dusky spots ; these are usually scattered equally over the whole surface, but in some specimens they are found confined to a zone around the larger end : an egg thus marked is represented in the accompanying Plate, fig. 85.

After they leave the nest, the young birds of this species remain with their parents during the rest of the summer and autumn ; and from the disparity of their plumage may readily be distinguished.

When they first begin to run about, their plumage exhibits none of the black marking that distinguishes the adult, and the white portions are obscured by a greyish tinge, the crescent upon the breast, which later in the season is well defined, is at this time only indicated by a few dark feathers which appear upon the greyish-white breast.

After the autumnal moult the colours become more distinct, and the crescent upon the breast is black ; still no black appears either upon the head or back, which remain of one equal tint of ash-colour, in some specimens strongly tinged

with green; the head darkens by degrees, and the forehead becomes of a dirty yellowish-white.

Great changes yet remain to be effected before the spring plumage is attained. These changes used to be attributed to the actual shedding and renewing of the feathers in spring, as well as in autumn; but later observations appear to contradict this supposition, and we are assured by Mr. Yarrell, that these changes of colour take place in the feather itself; and, consequently, that the Wagtail is subject only to a single and not a double moult.

The entire length of the Pied Wagtail is seven inches and a half. The beak from the tip to the forehead measures five lines. The wing from the carpus to the tip is nearly three inches and a half. The tail-feathers measure three inches and three quarters, and extend two and a half inches beyond the tips of the folded wings. The tarsus measures eleven lines, and the expanse of the foot, from the tip of the hinder to that of the middle claw, one inch and four lines. In this species when the wing is closed, the first, second, and third quill-feathers, and the tip of the longest tertial, are of equal length. The twelve feathers of the tail are nearly equal in length; the central pair, although the broadest at the base, are much narrowed towards the tip: the upper tail coverts are very long, covering nearly half the tail.

The female of this species is half an inch less in entire length, and all other measurements in proportion.

The adult male in winter plumage, as represented in the lower figure of Plate 85, from a specimen shot in December, is as follows:—crown of the head and nape, crescent upon the breast, rump, and upper tail-coverts, and the eight middle feathers of the tail, perfect inky black: the head and rump with purple reflections. The back and scapulars are also black, but the feathers in the middle of the back broadly fringed with hoary ash, slightly tinged with green. The

quill-feathers are black, narrowly edged with white; the tertials and the two lower rows of wing-coverts are also black, broadly edged with pure white; the lesser wing-coverts are entirely black. The flanks are slate-colour, softened into the white of the belly: the forehead is white, also the space around the eyes, the ear-coverts, the chin, and upper part of the breast: all the under parts below the black crescent are also white. The two outer tail-feathers on each side are white, except a portion of the inner web towards the base, which is occupied by a wedge-shaped black mark. The beak, legs, and feet are black, the iris very deep brown, appearing almost black.

The summer plumage of the adult male has less white than in winter: the white edges on the quill-feathers have disappeared, and the edges of the tertials and coverts are narrower. The back is entirely black, and the black crescent has extended itself upwards to the chin. A narrow white band borders the side of the breast, but does not extend so far as to divide the black head from the crescent, which are always in this species united in mature plumage.

The female differs from the male chiefly in the colour of her back and scapulars, which are never black, but pale ash-grey, and her quill-feathers incline to dusky.

The food of this species is various; in summer it consists of winged insects which they find among the grass, or spring after as they rise from it; they also frequent the shallow borders of rivers for the small fry of fish, which they catch with great dexterity: besides which they feed upon some species of water limpet, fragments of which may be found in their stomachs.

The upper figure in Plate 85 represents an adult female in summer plumage.

INSESSORES.
DENTIROSTRES.

MOTACILLIDÆ.

PLATE LXXXVI.

GREY WAGTAIL.

MOTACILLA BOARULA. (*Linn.*)

THE GREY WAGTAIL, which may readily, and at any distance be distinguished from all its British congeners by the greater length of its tail, is far less abundant in this country than the preceding species. In its manners it much resembles the pied-wagtail, but is even more light and elegant in its actions, as well as more beautiful in its plumage. It appears, also, more decidedly a frequenter of river sides, at least such are its habits in winter, at which season these birds are found with tolerable frequency on the banks of the Thames and its tributary streams, where they may be seen standing upon the clods of turf, or little islets of shingle that appear above the rippling water, or wading into the stream in search of food. Their flight is remarkably light, owing to their slender forms and lengthened tails. These birds are considered to be permanent residents in this country, without migrating to or from it, and such is probably the truth. Yet limited migrations from north to south take place, and it is the general impression that this species inhabits chiefly the northern parts of England in the summer, and the southern parts in the winter; but this, although probably true of the greater number, does not apply to all, as instances have been frequently recorded of its remaining during summer in the



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most southern counties to breed. If we may hazard an opinion on the subject, in support of which we can at present offer no proof, it is, that when this species appears in spring to retire from the south, it does not leave us on so distant a journey as is usually supposed, but on abandoning the low and sheltered river sides, where it has passed the winter, it only retreats to upland and hilly, or more wild and unfrequented spots, where it can in greater safety rear its young. A communication which appeared in a late number of the "Zoologist," from the pen of J. Heppenstall, Esq., of Upperthorpe, near Sheffield, seems to confirm this supposition. "The Grey Wagtail, (*M. boarula*)," says that gentleman, "resides with us all the year; in the winter season it is to be found along every brook, and even on the banks of the rivers Sheaf and Don, in the middle of our populous town, then, of course, in its plainer plumage. In the beginning of April it acquires its black throat, and then retires to the margins of the mountain streams on the adjacent moors, to breed." We have this species in tolerable plenty on the banks of the Thames that border Surrey and Middlesex, in autumn, as early as the middle of September, but never met with one in its summer garb, although nests and eggs that we believe to belong to this species have been brought to us.

The food of this Wagtail consists of various insects, such as flies and other winged inhabitants of grassy river sides, small water beetles, &c., and the minute mollusca that abound in such situations.

The nest of the Grey Wagtail is placed usually upon the ground, and is composed of fine grasses and fibrous roots, with a few feathers, and lined with a great quantity of the hair of cows and other animals, as well as horse-hair, which latter material forms the innermost, or true lining of the nest. The eggs, five or six in number, are of a short, oval

form, the shell thin and not much polished, measuring about eight lines by six and a half; they are yellowish stone colour in the ground, equally sprinkled over the whole surface with pale rufous-brown and ash-grey spots. Some specimens, as the one figured in the Plate, are nearly plain yellowish-brown, sometimes approaching to cream-white.

The Grey Wagtail has an extensive range over the European and Asiatic continents, being found as far as Japan, and the isles of Sumatra and Java. It inhabits also Switzerland, Italy, and Spain, and is found, according to Mr. Drummond, in the island of Corfu in winter, but is considered rare.

The entire length of this species is seven inches five lines. The wing, from the carpus to the tip, measures three inches, and the tail extends two inches and a half beyond the tips of the folded wings. The tarsi measure nine lines, and the expanse of the foot is one inch and one line. The feet are small in proportion to the size of the bird, and the hinder claw measures only two lines, very little exceeding that of the middle toe. The beak is rather long and slender, measuring five lines from the forehead to the tip, and eight lines from the tip to the gape. The tail-feathers are of equal length; the tertials are very long and pointed, and the largest passes beyond the tips of the quill-feathers when the wing is closed; the three first quill-feathers are nearly equal in length.

The plumage of the adult male in summer is as follows:—the forehead, crown of the head, nape, ear-coverts, back, and scapulars, fine bluish-grey; a streak of darker grey commences at the base of the beak, and passes through the eye towards the nape, and a white streak passes above and below it. The chin and throat are intense black, bounded on the exterior edge by a band of white, which commences at the base of the lower mandible, and extends nearly to the middle of the breast. The rest of the under parts, together with the

lower part of the back, are fine golden or ranunculus-yellow; the upper tail-coverts yellow, tinged with olive. The quill-feathers of the wings, and the greater and lesser coverts of the same are dusky, bordered with a paler tint of dusky-grey; the secondaries and tertials are dusky, inclining to black, with white borders along the outer web. The six middle feathers of the tail are dusky-black, slightly bordered towards the base with yellow; the outer feather on each side is white, the two next the same, except a narrow border of black upon the outer web, towards the base. The beak is dusky, the edges of the mandibles paler; the iris is dusky; the legs and feet flesh-colour.

The above is the dress of the adult male in the short period of the breeding season. At the autumnal moult, the black feathers of the throat are exchanged for white, and the upper part of the breast is tinged with rufous; the bright yellow feathers of the breast, belly, and flanks give place to white, clouded with pale sulphur. As spring advances, the under parts become richer in colour, and the basal parts of the throat-feathers become black; this colour gradually encroaches upon the white until it again occupies the whole feather.

The colours of the female are paler and less clean than those of the male, and she is believed not to attain the black throat until after the lapse of several years. The young birds in autumn much resemble the adult at that season. Nestlings, before the first autumnal moult, have the grey of the back strongly tinged with olive, and the streak over the eye indistinct and soiled with yellow.

The upper figure in Plate 86 represents an adult male in the breeding season; the lower figure the same, after the autumnal moult, from a specimen shot on the Thames, towards the end of September.

The egg figured 86 is that of the Grey Wagtail.

PLATE LXXXVII.

RAY'S YELLOW WAGTAIL.

MOTACILLA RAYI.

THIS lively species is a well-known summer visitor to this country, which appears to be the most northern limit of its migration. It arrives in England about the middle of April, and departs from thence southward as early as September. Its migration northward is more limited than that of the former species, seldom penetrating into Scotland, nor to much extent into Ireland. Its course, when leaving this country, which it does in small flocks, appears to be directed due south, which may account for its being unknown on the European continent. Montagu speaks of this species as "said to be" an inhabitant of Siberia and Russia in summer; but probably the *M. citreola* of Pallas has been thereby intended, since Temminck does not acknowledge it as a continental species.

The Yellow Wagtail appears to frequent the water rather less than the other species of this family, and is more frequently seen in upland fields or walking over the furrows of newly-ploughed land. These birds, however, frequently appear in company with the Pied species on lawns and in gardens, exhibiting the same manners. They are usually seen in pairs, or in autumn in small families, and show a strong attachment to one another. A remarkable instance





39.



of this once occurred to me. Being on the Thames one day, early in May, I saw a pair of Yellow Wagtails on the bank of the river. Observing that they were very close together, and being, at the time, in want of specimens, I fired, and winged one of them. The other bird, although apparently much frightened, remained hovering over its mate that lay on the grass, and touched it with its little feet and beak repeatedly. I was much grieved at having deprived the little creature of its mate, and as it would not be driven away, I loaded my gun again and shot the second bird on the wing, which fell close by its companion. The plumage of these two birds was very nearly similar when seen at a distance, but, on examination, the yellow underparts of the female were not so rich in colour, and the streak over the eye and the chin nearly white; the breast was strongly tinged with ochre, and the crown of the head and nape were bistre. Earlier in the spring, we have observed still more difference in the plumage of the two sexes.

An adult male, shot the 4th of July, had the following plumage. The top of the head and nape, the back and scapulars, and the upper coverts of the tail, olive, tinged with yellow; the cheeks the same. The forehead, a streak over the eye, and all the under parts rich golden yellow. The bill, orbits, and legs, black; the claws exceedingly slender. (This specimen had the crown of the head greyish-white, from the wearing away of the feathers; it was moulting.) The under surfaces of the wings were hoary. The two outer tail-feathers on each side are white, except a portion of the inner web in a slanting direction, so that when the tail is spread they appear quite white. The rest of the tail-feathers are blackish-brown, slightly edged towards the root with yellow. The wings hair-brown, all the feathers slightly edged with yellowish-white. The en-

ture length of this specimen was six and a half inches. The wing, from the carpus to the tip, is three inches; and the tail extends beyond it one inch and three quarters. The first three quill-feathers are of equal length, and the longest tertial exceeds them by about a line; the beak is five and a half lines from the forehead to the tip, very slender and slightly bearded; the tarsus measures ten lines, the middle toe nine lines; the claw of the hinder toe is long and nearly straight, measuring five lines.

The young birds of the year, in autumn, differ greatly from the adult. Their upper parts are strongly tinged with olive-brown. The chin is nearly white, the eye-streak rufous-white, the breast darker rufous, or ochre-yellow, and the underparts very pale and dirty yellowish-white. The wings and tail as in the adult.

This species is the *Motacilla flava* of our countryman Ray, who first described it, but not the *M. flava* of the Continent.

The nest of the Yellow Wagtail is usually built upon the ground, sometimes placed a little above it in an osier stump, or similar elevation. It is found in various localities, in open situations of meadow or moorland, and we have also met with it in islands upon the Thames occupied as osier grounds, in which places the species appears to abound. The nest is constructed of fine dry grass and fibrous roots, lined with the hair of horses and cows. One of our specimens is composed almost entirely of green moss, with a few tufts of grass outside, and one or two long horsehairs within. The eggs are usually of a long, oval form, about eight lines and a half long: the ground colour greenish-white, thickly freckled over with ash-grey and pale rufous-brown. Some specimens are nearly plain rich ochre, slightly marbled; such are usually smaller in size.

The egg figured 87 is that of the Yellow Wagtail of Ray.



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INSESSORES.
DENTIROSTRES.

MOTACILLIDÆ.

PLATE LXXXVIII.

WHITE WAGTAIL.

MOTACILLA LOTOR. (*Rennie.*)

WHILE enumerating the several kinds of Wagtails that are found in this country, we mentioned, in page 204, that a fifth species, new to British ornithology, had recently been added to the list. This species is the *Motacilla alba* of Linn., the common Black and White Wagtail of the Continent of Europe. Although long suspected to inhabit this country, the existence of the species in England was not ascertained until Mr. Bond of Kingsbury, in May 1841, procured some specimens on the banks of a reservoir near that place. Since that time, many individuals have been observed and procured. We ourselves suspected, many years ago, that more than one species of Pied Wagtail inhabited this country, having observed that those which frequented walls, parapets, and roofs of barns, etc., and road-sides in high situations, differed in appearance from such as are commonly seen by the river-side. In pursuance of this inquiry, we procured several specimens, varying much in appearance, and sent them to an ornithological friend for examination. These, however, proved, or were supposed to be the common pied-wagtail of England, in different states of age and sex. The attention of naturalists was, however, awakened to the subject, and the result has been, as

above stated, the discovery of the continental *Motacilla alba*, as an inhabitant of this country.

The White Wagtail occupies throughout the European Continent the place filled here by the pied species, and much resembles it in habits and manners. In summer, it is to be met with all over Europe, from Iceland, Sweden, and Norway, down to the most southern parts, and is found also in the northern parts of Asia. These birds are migratory in their habits, and appear to absent themselves from most European countries for a period, during severe weather. Mr. Drummond, in a list of the birds that frequent the island of Crete, mentions that a few specimens of the *M. alba* were seen at the end of April, after which they disappeared. These were, doubtless, on their passage from Africa to Europe. In Corfu, we are informed, by the same gentleman, that these Wagtails are most numerous in winter, when they may be seen in large flocks, frequenting the marshes, and disappear in summer.

On the Continent of Europe the White Wagtail is found in all situations of a moderately level character, inhabiting fields and cultivated parts, as well as heaths and moors. It frequents roadsides and open spaces in villages and towns, and delights to run upon the tops of low buildings, walls, and bridges, and to perch upon stacks of wood, or piles of stones. Like our more common species, they also follow the husbandman in his various field occupations of ploughing and harrowing, etc., for the sake of the small insects that are turned up by the stirring of the soil. They are found upon or near the sea-coast, as well as in more inland parts, upon the banks of rivers, as well as in countries of a more dry and elevated character. These birds roost among the branches of low trees, such as pollard willows and brushwood, and also among rushes and reeds, and are frequently observed to congregate together, with considerable clamour, in some

chosen spot of this description, whither they appear to resort from the country around.

On the Continent of Europe, in similar latitudes with our own, they arrive in March and April from their winter quarters, and roost among reeds, as before mentioned, assembling soon after sunset and dispersing at daybreak.

As soon as the willow-trees are in leaf they resort to them as a matter of course, and continue to frequent them during the breeding-season, and roost in such as overhang the watery bank on which the nest is placed.

The young birds accompany the parents in their flights during the summer, and migrate with them in autumn. Before their departure they may be seen in small parties flying together, and pursuing one another with graceful and quick movements.

In its general character, the White Wagtail is restless and active, social in its habits, and consequently everywhere well known. From the first dawn of morning till dark they are constantly in motion, and, although they have considerable exercise in providing food, they still further employ their activity in chasing one another, and frequently join other small birds in pursuing and driving off birds of prey. On the ground they run at an indescribably swift pace, and, considering that they nod with their heads at each step, the bodily exercise of these birds is wonderful. Their flight is in long arches, and performed in about mid-elevation.

The food of the White Wagtail consists of various kinds of insects and their larvæ, which they readily obtain in all the different situations they frequent, either among the stones on the banks of rivers, or upon green water weeds, on the roofs of buildings, or in ploughed fields.

The nest of this bird is differently situated, according to existing circumstances; it generally occupies a hole, but shelter appears to be more sought after than concealment,

as the grasses and other materials frequently straggle out. It is often found in a hole in a tree, sometimes high in the stem and sometimes low, or among the roots that have become exposed by water-courses, in heaps of stones, or among wild timber. Occasionally, the nest of this bird is found under the eaves of a roof among the timbers, or in a straw-thatch. Both male and female assist at the construction of the nest, the foundation of which consists chiefly of dry sticks, roots of grasses and straw, and dried leaves, intermixed with green moss; the second layer of finer material of the same kind, lined with wool, cow, or horse-hair, which serve as a finish, and complete the nicely-rounded cup. The eggs are similar in size and form to those of our common pied-wagtail, being very blunt at one end and pointed at the other. The shell is very smooth, but without polish. The ground-colour is bluish-white, more or less obscured by small grey specks; the eggs are, besides, speckled, and marked with very fine chocolate-coloured spots, chiefly at the larger end, and sometimes forming a zone. Six or seven are the usual number.

The young make their appearance in a fortnight, and are at first covered with a black down, with pink legs and beak, and yellow corners to the mouth.

These birds have generally two broods in the year, and in a mild spring they have eggs as early as the middle of April.

The dimensions of this species differ so little from those of the common pied-wagtail of England, that no specific distinction has been established from them. Difference enough, however, exists in the tints of the plumage and distribution of the colours, to justify the distinction recognised between them. One variation of form we suggest, which may prove, if permanent, a generic distinction, namely, that the tertials of this species are not quite so long in proportion as in the *Motacilla alba*.

The dimensions of the White Wagtail are as follows

Entire length, seven inches and a quarter. The wing, from the carpus to the tip, measures three inches one line; and the tail two inches eleven lines, two inches of which extend beyond the tips of the folded wings. The beak measures four lines and a half from the forehead to the tip, it is very slender, and strongly notched; the nostrils are oval. The first, second, and third quill-feathers are nearly equal in length, the second rather exceeding the rest. The tarsi measure ten lines, the middle toe nine: the legs and feet are small and slender, and the claws very sharp.

In adult summer-plumage the male of this species has the forehead, cheeks, sides of the neck, and under plumage, pure white; the crown of the head and nape black; the throat is also black, but the black of this part is isolated, and does not at any period unite with the black of the head and nape; the back and scapulars are pale ash-colour. The eight central feathers of the tail are black, as well as the upper coverts of the same: the under tail-coverts are pure white. The quill-feathers of the wing are black, narrowly edged with white; the tertials and coverts of the wing the same, with broader white edges. The sides of the breast and flanks ash-grey; the iris, beak, and legs, are black. The female differs only in the tints of her plumage, which are less clear and full.

In winter-plumage the throat becomes white, and only a crescent of black is left upon the breast. The corners of this crescent are not so far extended as in our common pied species, and *never* unite with the black of the nape; the grey of the upper parts is paler in colour.

The young birds have the same plumage as the immature of the pied-wagtail, and complete their perfect feathering by undergoing similar changes.

INSESSORES.
DENTIROSTRES.

MOTACILLIDÆ.

PLATE LXXXIX.

GREY-HEADED WAGTAIL.

MOTACILLA FLAVA. (Linn.)

THIS species, lately recognized as British in consequence of the occurrence of several specimens in various parts of the kingdom, is one of the most common wagtails of the European Continent, namely, the *Motacilla flava* of Linnæus. For many years it has been strangely confused in England with a species common here, the yellow-wagtail of Ray, from which several important particulars sufficiently distinguish it in every state of plumage.

The distribution of the Grey-headed Wagtail throughout Europe and Asia, is as widely extended as that of the white-wagtail, and, as a species, it is far more numerous than that or any other. It is found in summer as high as the Arctic Circle, and in many parts of Asia and Africa; in the central states of Europe it is innumerable, inhabiting all parts of Germany, except the most mountainous. It is abundant in the islands along the western coast of Denmark, and also of Norway; and plentiful in France and Holland. In all these countries it is a summer-visitor, arriving in the most southerly parts about the end of March, or beginning of April, and penetrating gradually northward. On their first arrival these birds associate with the white-wagtails, and roost with them among the reeds. Their favourite residence in spring is in





damp, rank meadows, where low willows abound ; and in pasture lands beside rivers, among the long grass. They do not, however, confine themselves to the water-side, but are found in autumn to frequent stubble-fields and sheep downs, at which time they associate with the meadow-pipit. Although not arboreal in their habits, these birds are often seen, like our own wagtails, among willows and low shrubs ; their footing upon the branches appears insecure, their feet and long hinder toes being more adapted for running upon the ground, than for perching. They run very quickly, stopping before they take flight ; and on alighting fan their tails up and down several times. In manners, these birds are quick, restless, and shy ; in the breeding-season they exhibit more confidence, especially when accompanied by their young, of whose safety they are very watchful. Early in autumn, these wagtails assemble in flocks, and are seen to fly about for several days, as if collecting for their migratory flight ; on a sudden they disappear, and by October few are left behind.

The Grey-headed Wagtail breeds in retired spots ; its nest is commonly placed upon the ground, in situations similar to those chosen by our common yellow species, and the eggs, as well as the nest, bear also great resemblance.

The entire length of this species is six inches and a half. The wing, from the carpus to the tip, measures three inches two lines, and the tail extends about an inch and three-quarters beyond the tips of the wings. In the specimens that have come under our observation, the longest of the tertials do not reach to the tip of the quill-feathers by about two lines. The feet are larger and stronger than in most of this family ; the tarsi measure nearly an inch, and the expanse of the foot is an inch and a half, that space being nearly equally divided between the middle and hinder toes ; the claw of the hinder is four lines and a half in length, strong, and moderately arched. The first three quill-feathers of the

wing are nearly equal in length. The beak is almost six lines in length from the forehead, strong, and rather stout.

The adult male in summer has the head, nape, and ear-coverts, bluish-grey, and a narrow line of a darker tint proceeds from the eye to the beak. Above the eye, and below the ear-coverts, pass two narrow white lines, proceeding from the bases of the upper and lower mandible. The back, scapulars, and upper tail-coverts, are pure olive; the tail-feathers dusky, except the two outer on each side, which are white; the wings are dusky, with broad yellowish-white borders upon the secondaries, tertials, and wing-coverts. In autumn the under parts of the body are paler in colour.

The female in summer has nearly the same distribution of colours as the male, but they are less pure and full. In autumn the grey head of the female is clouded with olive, and the throat inclining to buff; in this state it is represented in the upper figure of Plate 89; and the male in full adult summer-plumage is represented in the lower figure. The young male of the year is much like the adult female in autumn.



INSESSORES.
DENTIROSTRES.

ANTHIDÆ.

PLATE XC.

ROCK PIPIT.

ANTHUS AQUATICUS. (*Selby.*)

THE PIPITS, a small group next to be described, and consisting but of four species belonging to this country, are nearly allied in habits, and manners, to the wagtails; feeding upon the same kinds of food, and living, like them, chiefly in situations of an open character, such as fields, and plains, and the gravelly shores of rivers. They are also closely allied to the larks, and resemble these latter much in form and plumage, in the construction and position of their nests, and in the character of their eggs: they appear, therefore, properly placed between the two. The generic distinctions, in point of form, between the wagtails and the pipits are slight, except in the tail, which in the wagtails is long and even at the end, and in the pipits shorter and forked.

The Rock Pipit is in this country exclusively a maritime bird, and such it was considered by Montagu, who first distinguished it from the other pipits, and described it as the dusky lark. That acute naturalist observed it first on the rocky coast of South Wales; and it has since been ascertained to inhabit most parts of the shores of England, Scotland, and Ireland, as well as the islands of Shetland and Orkney.

We have always found it impossible to reconcile, with our English Rock Pipit, the *Pipit spioncelle* of the first and second parts of Temminck's *Manuel* (although considered by that author as the same), on account of the very different localities spoken of as inhabited by the *spioncelle*. We are happy to find that Temminck has himself ascertained and corrected his error in the fourth volume of his *Manuel*, in which he gives an exact description of our indigenous species under the title of *Anthus obscurus*. From this author it appears that the Rock Pipit inhabits the island of Feroe, and the coasts of Norway, Denmark, and Sweden. It is also found in Holland, and along the western maritime borders of France. In England, as elsewhere, its residence is invariably upon the borders of the sea, seldom penetrating further inland than the salt marshes that in some places are found upon the coast. So seldom does this species wander from the immediate coast, that the occurrence of several individuals upon the banks of the river Deben in Suffolk, at the distance of eight or nine miles direct from the sea, was considered worthy of being noted in the memorandums of a friend, a good ornithologist, as a remarkable circumstance.

The food of the Rock Pipit consists of worms and marine insects, which it seeks among sea-weeds and other plants that grow upon the shores, or are thrown up by the waves.

The nest of this species is placed upon the shore, or upon the rocks, or banks, at a little elevation above it: it is composed of grasses, or the dry remains of marine plants. The eggs, usually five in number, vary considerably in appearance. Some are yellowish-white in the ground-colour, mottled over with grey and dusky brown: in some specimens the brown so much prevails as nearly to cover the eggs, which then present a mottled surface of two dark shades.

In others, even from the same nest, a very peculiar and striking difference is found. One set sent to us for examination, had one of the eggs as last described : of the other two one was of a perfect whole-coloured chocolate brown, the other of an even tint of greenish grey, much resembling the colour of some of the plain specimens of the nightingale's eggs ; this latter specimen has a fine hair-like streak surrounding the egg towards the larger end. These specimens were from the coast of Suffolk. All the eggs of this species that we have seen, have very little polish on the surface, and are of an uniform shape and size, nearly nine lines long and six and a half lines in diameter.

The Rock Pipit is indigenous in this country, and remains stationary, as far as its habits are known, throughout the year. On the northern coasts of Europe it is only known as a summer visitor, retiring southward in autumn. Whether any accession of numbers takes place on our shores, we are not aware, but it is highly probable that some of this species may, like the larks, seek refuge here from the inclemencies of northern climates.

The distribution of this species towards the east, does not appear to be extensive ; no mention is made of it in Mr. Drummond's list of the birds of Corfu and Crete, and Temminck has received no specimens of this species from Japan.

The entire length of this species is rather above six inches and a half, and it is a stout and large-made bird, weighing seven drams. The wing measures from carpus to tip three inches and a half, and the tail extends beyond the closed wings about an inch and five lines. The wing has the first quill-feather the longest, the second, third, and fourth gradually diminishing in length in a very trifling degree ; the longest tertial feathers reach to within three lines of the tips

of the primaries. The tail is forked, the outer feathers being about a quarter of an inch longer than the central ones. The beak measures five and a half lines from the forehead to the tip, is slender, and sharply pointed. The tarsi are ten lines in length; the middle toe nearly the same; the hinder toe measures eight lines, of which four belong to the claw. All the claws are slender and much arched; the hinder one forming in the arch one third of a circle;—thus admirably and beautifully is this species adapted to retain a safe footing upon the rocks and among the shingly localities in which it dwells.

The plumage of this species is as follows:—The whole upper feathering, including the crown of the head and ear-coverts, the nape, back, scapulars, upper coverts, and the two middle feathers of the tail olive-brown; the centre of the feathers on the back and scapulars marked with dusky streaks. The quill-feathers are dark-brown, with lighter edges; the greater and lesser coverts olive-brown, edged and tipped with a paler colour. The outermost feathers of the tail are dirty white, the rest, except the centre pair, dusky. The under parts of the body are pale ochre-yellow, tinged with olive, and an obscure streak of the same passes over the eye: the breast is marked with dusky spots, and the flanks with long streaks of the same colour: the flanks and thighs are also tinged with olive. This species appears to undergo some variations of colour at different seasons, being observed to have most of the olive-tinge in autumn.

We are unwilling to add another name to the long list already bestowed upon this bird, as tending, perhaps, to add to the confusion that now exists on the subject, or we would suggest *Maritimus* as a more proper trivial name for this species, than those it at present bears.

The egg of the Rock Pipit (which stands at the bottom of

a plate, containing four figures) has been numbered by mistake 89, instead of 90, the number it ought to have borne.

The egg marked 90 *var* : is a representation of the variety of the Rock Pipit mentioned in the preceding page.

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